

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

March 27, 2020

Craig Kleppe Product Registration Manager BASF Corporation 26 Davis Drive PO Box 13528 Research Triangle, NC 27709

Subject: Registration Review Label Mitigation for Pendimethalin

Product Name: Prowl H2O Herbicide EPA Registration Number: 241-418

Application Dates: 6/27/2018 Decision Numbers: 560843

# Dear Dr. Kleppe:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Pendimethalin Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

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If you have any questions about this letter, please contact Darius Stanton by phone at 703-347-0433, or via email at stanton.darius@epa.gov.

Sincerely,

Linda Arrington, Branch Chief

Risk Management and Implementation Branch 4

Pesticide Re-Evaluation Division

Office of Pesticide Programs

Enclosure



**Pendimethalin** 

Group

3

Herbicide

# ACCEPTED

Mar 27, 2020

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under

EPA Reg. No. 241-418

# Prowl® H20

# Herbicide

# For Use in Selected Crops

(See Table 1, Crop Uses)

#### **Active Ingredient\*:**

pendimethalin: N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine	38.7%
Other Ingredients:	61.3%
Total:	100.0%

<sup>\*1</sup> gallon contains 3.8 pounds of pendimethalin formulated as an aqueous capsule suspension.

EPA Reg. No. 241-418

**EPA Est. No.** 

# KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside for complete **First Aid**, **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

### **Net Contents:**

FIRST AID		
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>DO NOT induce vomiting unless told to do so by a poison control center or doctor.</li> <li>DO NOT give anything to an unconscious person.</li> </ul>	
If in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after first 5 minutes; then continue rinsing.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	
If on skin	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	
HOTLINE NUMBER		

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).

# **Precautionary Statements**

### **Hazards to Humans and Domestic Animals**

**CAUTION.** Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes, or clothing.

# Personal Protective Equipment (PPE)

# Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves including barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber  $\geq$  14 mils, natural rubber  $\geq$  14 mils, polyethylene, polyvinyl chloride ≥ 14 mils, or viton ≥ 14 mils
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

# **Engineering Controls**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [(40 CFR 170.240)(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### **USER SAFETY RECOMMENDATIONS**

#### **Users should:**

- Wash hands thoroughly after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### **Environmental Hazards**

This product is toxic to fish. **DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

Nontarget Organism Advisory Statment: This product is toxic to plants and may adversely impact the forage and habitat of nontarget organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of nontarget organisms by following label directions intended to minimize spray drift.

# **Endangered Species Protection**

This product may have effects on federally listed threatened or endangered plant species or their critical habitat. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county or parish in which you are applying the pesticide. To determine whether your county or parish has a Bulletin, and to obtain that Bulletin, consult http://www.epa.gov/espp/, or call 1-844-447-3813 no more than 6 months before using this product. Applicators must use Bulletins that are in effect in the month in which the pesticide will be applied. New Bulletins will be available from the above sources 6 months before their effective dates.

If endangered plant species occur in proximity to the application site, the following mitigation measures are required:

- If applied by ground, leave an untreated buffer zone of 200 feet. The product must be applied using a low boom (20 inches above the ground) and ASAE fine to medium/ coarse nozzles.
- If applied by air, leave an untreated buffer zone of 170 feet. Must use straight-stream nozzles (D-6 or larger); wind can be no more than 8 mph, and release height must be 15 feet or less.

# **Directions For Use**

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This label must be in the possession of the user at the time of pesticide application.

Observe all precautions and restrictions in this label and the labels of products used in combination with **Prowl® H2O herbicide**. Use of **Prowl H2O** not consistent with this label can result in injury to crops, animals, or persons. Keep containers closed to avoid spills and contamination.

**DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide protection.

BASF intends that this product may not be used for manufacturing products for application to turf and ornamentals.

**DO NOT** enter or allow other people (or pets) to enter the treated area until sprays have dried.

# STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal.

# **Pesticide Storage**

**Prowl H20** freezes around 15° F and is stable under conditions of freezing and thawing. Product that has been frozen should be thawed and recirculated prior to use.

# **Pesticide Disposal**

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. Open dumping is prohibited.

If these wastes cannot be disposed of by use according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

(continued)

# STORAGE AND DISPOSAL (continued)

# **Container Handling**

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**Refillable Container.** Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

**Triple rinse as follows:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

(continued)

# STORAGE AND DISPOSAL (continued)

# **Container Handling** (continued)

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, wornout threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

# In Case of Emergency

In case of large-scale spill of this product, call:

• CHEMTREC 1-800-424-9300

• BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

# Steps to take if material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

# AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **24 hours**.

**EXCEPTION:** If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

#### **Product Information**

Prowl® H2O herbicide is a selective herbicide for controlling most annual grasses and certain broadleaf weeds as they germinate. Refer to **Table 1** for crop uses. Refer to **Table 2** for a complete list of controlled weeds. **Prowl H2O** will not control established weeds.

# Table 1. Crop Uses

African marigold

alfalfa

artichoke

asparagus

berries, low-growing

Brassica head and stem vegetables

bushberries, bearing and nonbearing

caneberries, bearing and nonbearing

carrot

celery (and other leaf petiole vegetables in Group 22B)

citrus fruit trees, bearing and nonbearing

corn (field, field seed, fresh sweet, popcorn, popcorn seed)

cotton

date palm trees, nonbearing

edible beans

fallow

fig trees, nonbearing

forage grasses (cool-season)

forage grasses (warm-season)

fruiting vegetables

garlic

grain sorghum

grape, bearing and nonbearing vineyards

hops

leaf lettuce

leafy Brassica greens

leek

lentil and peas

melons

mint

monarda

nut trees, bearing and nonbearing

olive trees, bearing and nonbearing

onions and shallots (dry bulb, green)

peanut

perennial grasses grown for seed

pome fruit trees, bearing and nonbearing

pomegranate

potato

rice

rosemary

safflower

small fruit climbing vines, bearing and nonbearing

soybean

stone fruit trees, bearing and nonbearing

strawberry

sugarcane

sunflower (and other Group 20B oilseeds)

tobacco

triticale

vegetable soybean (edamame)

wheat

#### **Table 2. Weeds Controlled**

(see crop sections for additional weeds controlled)

Weeds controlled with Prowl H2O applied up to 4 pts/A			
Grass Weeds			
Annual ryegrass*	Italian ryegrass*		
Barnyardgrass	Japanese brome*,1		
Canarygrass*,2	Johnsongrass (seedling)		
Cheat*,2	Jointed goatgrass*,1		
Crabgrass	Oat, wild*		
Crowfootgrass	Panicum, fall		
Cupgrass	Panicum, Texas		
Downy brome*	Sandbur, field		
Foxtail, giant	Shattercane*		
Foxtail, green	Signalgrass*		
Foxtail, yellow	Wild proso millet*		
Goosegrass	Witchgrass		
Hairy chess*,1	Woolly cupgrass*		
Itchgrass*			
Broadlea	of Weeds		
Amaranth, Palmer Mustard, black <sup>2</sup>			
Bittercress <sup>[2]</sup>	Pigweed species		
Black nightshade	Prickly sida		
Bugloss, small <sup>1</sup>	Prostrate knotweed <sup>[2]</sup>		
Carpetweed	Purslane		
Chickweed, common*	Pusley, Florida		
Common groundsel	Redstem filaree		
Henbit	Shepherdspurse*		
Kochia	Smartweed, Pennsylvania*		
Lady's thumb	Spurge, annual		
Lambsquarters, common	Velvetleaf*		
Lambsquarters, slimleaf <sup>2</sup> Waterhemp species			
London rocket*	Wild mustard		
* Suppression, but controlled when <b>Prowl H2O</b> use rate exceeds 4 pts/A.  ¹ Not suppressed or controlled in California ² Not controlled in California [Optional text in brackets]			

(continued)

**Table 2. Weeds Controlled** (continued) (see crop sections for additional weeds controlled)

Weeds controlled with Prowl® H2O herbicide applied at 4 pts/A or more		
Grass Weeds		
Annual bluegrass Lovegrass		
Browntop panicum	Sprangletop, Mexican	
Grass, Guinea <sup>2</sup>	Sprangletop, red	
Junglerice Swollen fingergrass		
Broadleaf Weeds		
Dodder <sup>†</sup>	Prostrate knotweed	
Fiddleneck	Puncturevine	
Morningglory**	Redmaids rockpurslane	
Prickly lettuce		

<sup>&</sup>lt;sup>†</sup> For optimum dodder control, use the highest labeled rate of **Prowl H2O** specified in the specific crop.

# **Mode of Action**

Pendimethalin, the active ingredient in **Prowl H2O**, is a **Group 3 (WSSA)/Group K\_1 (HRAC)** herbicide belonging to the dinitroaniline chemistry class. **Prowl H2O** is a meristematic inhibitor that interferes with meristematic plant cell division or mitosis inhibiting germinating seedling growth.

# **Herbicide Resistance Management**

Prowl H2O is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to Prowl H2O and other Group 3 herbicides. Weed species with resistance to Group 3 may eventually dominate the weed population if Group 3 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by Prowl H2O or other Group 3 herbicides.

To delay herbicide resistance consider:

- Avoiding the consecutive use of Prowl H2O or other target site-of-action Group 3 herbicides that have a similar target site of action on the same weed species.
- Using tank mixes or premixes with herbicides from different target-site-of-action groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive IPM (Integrated Pest Management) program including cultural and mechanical methods.
- Monitoring treated weed populations for loss of field efficacy, and control of escapes with effective alternative herbicides or mechanical methods.
- Identify weeds present in the field through scouting and field history and understand their biology. The

- weed-control program needs to consider all of the weeds present.
- Scout fields prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.
- Scout fields after application to verify the treatment was effective.
- Suspected herbicide-resistance weeds may be identified by these indicators:
  - 1. Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - 2. A spreading patch of non-controlled plants of a particular weed species; and
  - 3. Surviving plants mixed with controlled individuals of the same species.
- If resistance is suspected, treat weed escapes with an herbicide with a different MOA and/or use non-chemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Report any incidence of non-performance of this product against a particular weed species to your local BASF representative.
- Contacting your local extension specialist, certified crop advisors, and/or manufacturer for herbicide resistance management and/or integrated weed management directions for specific crops and resistant weed biotypes.

# **Application Rate**

Use rates for **Prowl H2O** when used alone, in tank mix, or for sequential applications are given in **Crop-specific Information**. Use rates of this product vary by soil texture and organic matter. See **Table 3** for soil texture groupings used in this label.

**DO NOT** apply more than the maximum labeled rate of **Prowl H2O** for any soil type.

**Table 3. Soil Texture Groups** 

Coarse	Medium	Fine
sands loamy sands sandy loams	sandy clay loams* sandy clays loams silt loams silts	silty clay loams* silty clays clay loams clays

<sup>\*</sup>Sometimes considered transitional soils and may be classified as medium-texture or fine-texture soils.

For **peat** and **muck** soils. **Prowl H2O** may be used on peat and muck soils, but weed control may be inconsistent and/or reduced. Use maximum labeled use rate allowed in the specific crop.

# **Application Timings**

**Prowl H20** will provide most effective weed control when applied by ground or aerial equipment and subsequently incorporated into soil by rainfall, sprinkler irrigation, or mechanical tillage before weed seedling germination. **Prowl H20** can also be applied through chemigation,

<sup>\*\*</sup> Suppression

<sup>&</sup>lt;sup>2</sup> Not controlled in California

including flooded basin irrigation systems. **Prowl® H2O herbicide** may be applied preplant surface, preplant incorporated, surface incorporated, preemergence, early postemergence, postemergence incorporated (CULTI-SPRAY), or by layby treatment. See **Crop-specific Information** for specific application directions and restrictions by crop.

**Preplant Surface Application.** For use in minimum-tillage or no-tillage production systems, apply **Prowl H2O** alone or in tank mixes within 45 days of planting. When making early preplant surface application (15 to 45 days before planting), **Prowl H2O** should be tank mixed or followed by a postemergence herbicide application. Rainfall or sprinkler irrigation after application is required to move this product into the upper soil surface where weed seeds germinate.

**Preplant Incorporated Application.** Apply **Prowl H2O** and incorporate into the upper (1 inch to 2 inches) soil surface within 60 days of planting. Use an implement capable of giving uniform incorporation; two-pass incorporation usually results in a more consistent result.

**Surface Incorporated Application.** Uniformly apply **Prowl H2O** as broadcast or banded treatment to soil surface underneath established trees and/or in ground areas between trees rows. Incorporate into upper (1 inch to 2 inches) soil surface using rainfall, sprinkler irrigation, or shallow mechanical incorporation using an implement capable of giving uniform incorporation; two-pass mechanical incorporation usually results in a more consistent result.

Preemergence Surface Application. Broadcast treatment uniformly to the soil surface at planting and up to 2 days after planting (refer to **Crop-specific Information** section for exceptions). Rainfall, sprinkler irrigation, or shallow mechanical incorporation after application is required to move this product into the upper soil surface where weed seeds germinate. If adequate rainfall or irrigation does not occur, or soil crusting or soil compaction has occurred, and weed seedling emergence begins, a shallow cultivation or rotary hoeing or light harrow will improve performance. Make sure that crop seeds are below the tilled soil surface area.

**Early Postemergence Application. Prowl H20** must be applied before weed seedling emergence or in a tank mix with products that control the emerged weeds. Refer to **Crop-specific Information** for specific postemergence application instructions by crop.

Postemergence Incorporated Application (CULTI-SPRAY). Before application, crop must be cultivated in such a manner as to throw at least 1 inch of soil over the base of the crop plants. This will prevent direct contact of **Prowl H2O** and the zone of brace root formation.

Prowl H2O must be applied broadcast with a ground sprayer when crop is at least 4 inches tall up to layby. Use drop nozzles if crop foliage will prevent uniform coverage

of the soil surface within the rows. Thoroughly and uniformly incorporate **Prowl H2O** treatments into the soil:

- 1. With a sweep-type or rolling cultivator set to provide thorough incorporation in the top 1 inch of soil, **or**
- With adequate overhead irrigation water or rainfall. See Crop-specific Information (Corn and Grain Sorghum) for more details on (CULTI-SPRAY) application.

**Layby Application.** Apply **Prowl H2O** directly to the soil between rows as a directed spray after the last normal cultivation (layby). See **Crop-specific Information** for more details on layby application.

**Split Application. Prowl H2O** may be applied preplant incorporated within 60 days of planting and followed by a preemergence application at planting or up to 2 days after planting (refer to **Crop-specific Information** section for exceptions). The total amount of **Prowl H2O** applied per acre per season cannot exceed the highest labeled rate for any given soil type. See **Crop-specific Information** for more details on split applications.

**Fall Application. Prowl H2O** may be used in fall application programs in certain crops. See **Crop-specific Information** for details on fall application timing.

# **Application Instructions**

**Prowl H2O** may be applied using water or sprayable fluid fertilizer (including straight 32-0-0 or 28-0-0) as the spray carrier. **DO NOT** apply **Prowl H2O** after crop emergence (postemergence) in sprayable liquid fertilizers. Additionally, **Prowl H2O** may be impregnated on dry bulk fertilizer. For all applications, avoid overlapping that could result in possible crop injury.

# **Spray Mix Compatibility Test**

If liquid fertilizer and/or herbicide(s) mixture separates in the spray tank, clogged equipment and uneven application can result. Always predetermine the compatibility of **Prowl H2O** alone or with other herbicides based on the following compatibility jar test:

- 1. Add 1 pint of fertilizer to a quart jar.
- 2. Add 1 to 4 teaspoon(s) of the dry flowable (DF), wettable powder (WP), aqueous solution (AS), flowable (F), or liquid (L) formulation (depending on mixing ratio required) to the liquid fertilizer. To calculate teaspoons of the formulation to add:

lbs or pts of product/acre gallons of fertilizer/acre x 11.4 = teaspoons of herbicide to add to 1 pint of fertilizer

- Close the jar and agitate until the herbicide(s) are evenly dispersed in the liquid fertilizer. If the materials do not disperse well, it may be necessary to slurry the chemicals in water before adding to the fertilizer.
- 4. After dispersing the materials, add appropriate number of teaspoons of **Prowl H2O** to the jar and shake well. Add water soluble concentrate herbicides to the mixture last and agitate. Let the mixture stand for 30 minutes;

then observe the results. Look for signs of separation: an oily layer or globules, sludge, flakes or other precipitates.

- 5. Evaluate compatibility.
  - a. If the herbicide(s) and liquid fertilizer mixture does not separate, use this mixture in your spray tank.
  - b. If the mixture separates but mixes readily with shaking, the mixture can be used if good agitation is maintained in the spray tank.
  - c. If separation of the mixture occurs and agitation does not correct this problem, a compatibility agent is needed.
- 6. If the need for a compatibility agent is demonstrated, BASF recommends the following procedure: Using a clean quart jar, repeat step 1 above and add 1/2 teaspoon of the compatibility agent to the liquid fertilizer. Mix well and repeat steps 2, 3, and 4. If separation or precipitation occurs with the compatibility agent, DO NOT use Prowl® H2O herbicide with that specific liquid fertilizer.

# **Aerial Application**

Uniformly apply in 5 or more gallons of water per acre.

# Spray Drift Management for Aerial Applications

- DO NOT release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must not exceed 65% of the wingspan for fixed wing aircraft or 75% of the rotor diameter for helicopters. Otherwise, the boom length must not exceed 75% of the wingspan for fixed wing aircraft or 90% of the rotor diameter for helicopters.
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply during temperature inversions.

# **Ground Application (Broadcast)**

Uniformly apply in 10 or more gallons of water per acre or 20 or more gallons of liquid fertilizer per acre. Keep the bypass line on or near the bottom of the tank to minimize foaming. Nozzle and in-line screens must be no finer than 50 mesh.

# **Ground Application (Band)**

Uniformly apply the broadcast equivalent rate and volume per acre. Calculate:

 band width in inches
 x
 broadcast rate per acre
 =
 band rate per acre

 band width in inches row width in inches
 x
 broadcast volume per acre
 =
 band volume per acre

# Spray Drift Management for Ground Applications:

- Applicators must only apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

# **Ground Application (Dry Bulk Fertilizer)**

Apply **Prowl H2O**/dry bulk fertilizer mixtures only with ground equipment. See **Crop-specific Information** for crops suitable for dry bulk fertilizer applications. **DO NOT** impregnate **Prowl H2O** onto coated ammonium nitrate or limestone because these materials will not absorb the herbicide. Dry fertilizer blends containing mixtures of ammonium nitrate or limestone may be impregnated with **Prowl H2O**. A minimum of 200 pounds of impregnated dry bulk fertilizer, excluding the weight of ammonium nitrate or limestone, must be applied per acre.

Calculate the amount of **Prowl H2O** impregnated on a ton of dry bulk fertilizer based on the rate of fertilizer to be applied per acre:

To impregnate **Prowl H2O** on bulk fertilizer, use a closed rotary-drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Spray nozzles must be placed to provide uniform coverage of **Prowl H2O** onto the fertilizer during mixing.

Apply the **Prowl H2O**/dry bulk fertilizer mixture with a calibrated dry fertilizer spreader. The **Prowl H2O**/dry bulk fertilizer mixture must be spread uniformly on the soil surface.

# Chemigation Application via Sprinkler Irrigation and Drip Irrigation Systems

**Prowl H2O** may be applied as a chemigation treatment through sprinkler irrigation and drip irrigation systems. Refer to **Crop-specific Information** sections for individual crops. **DO NOT** apply **Prowl H2O** via chemigation to crops unless specified in **Crop-specific Information** section.

Apply this product **ONLY** through a sprinkler irrigation system of the following type: center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move

Apply this product **ONLY** through a drip irrigation system that has emitters above the soil surface.

DO NOT apply this product through any other type of sprinkler irrigation or drip irrigation system.

Uniform distribution of **Prowl® H2O herbicide**-treated irrigation water is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness, or illegal pesticide residues in the crop. If you have any questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.

The system must be calibrated (with water only) to ensure the amount of **Prowl H2O** applied corresponds to the specified rate. Apply **Prowl H2O** in 1/2 to 3/4 inch of water during the first sprinkler set (use at least 1 inch of water in the states of **New Mexico**, **Oklahoma**, and **Texas**). BASF recommends mixing **Prowl H2O** with water at a 1:1 ratio in the injection nurse tank to assist with product flowability. Maintain agitation in the injection nurse tank to keep a uniform herbicide suspension during application. When application is complete, flush the system with water.

# Chemigation Instructions (for low-volume micro sprinklers)

Output of low-volume sprinkler equals 4 to 50 gallons per hour (gph) per emitter. Point of application **MUST** be above ground.

Irrigation system should run a sufficient amount of time before **Prowl H2O** injection to have all emitters functioning properly. After system is operating properly, length of injection should be such that at one period of time during the injection, the first and last emitters in the system contain **Prowl H2O**-treated water. Add **Prowl H2O** to the supply tank already filled with the volume of water required for the injection period. Maintain agitation in **Prowl H2O** injection tank. Mix **Prowl H2O** in clean water and inject down-line from filters. After **Prowl H2O** injection, flush system for a period of time sufficient to clear the line of **Prowl H2O**. (If **Prowl H2O** is applied during a normal irrigation cycle, make injection during the last stage.)

# Chemigation Calibration (for low-volume micro sprinklers)

Calculation of use rate is based on wetted area around emitters - **NOT** on tree acres. To calculate amount of **Prowl H2O**:

- Treated area per each emitter = A
   A = 3.14 x (radius x radius)
- 2. The area in square feet wet in each acre = B

$$B = \frac{A \times emitters/acre}{144}$$

- 3. The total area (in square feet) wet by your system = C C = B x acres covered by system
- 4. Rate per treated acre of **Prowl H2O** (based on length of control desired) = R

Amount of **Prowl H2O** to inject = S

$$S = \frac{C}{43,560} \times R = qts \text{ of } Prowl H2O$$

# **Example:**

If the average distance from emitter to perimeter of wetted area measured 1 inch below soil surface is 13 inches, then

$$A = 3.14 \times (13 \text{ inches } \times 13 \text{ inches})$$
  
and  $A = 530.7 \text{ square inches}$ 

If there are 300 emitters per acre, then

$$B = \frac{530.7 \times 300}{144} \text{ and } B = \frac{1105.6 \text{ square feet}}{\text{wetted per acre}}$$

If the system covers 20 acres, then

C = 1105.6 square feet per acre x 20 acres and

C = 22,112 square feet wetted by system

If the desired application rate per treated acre is 2.0 qts of **Prowl H2O**, then

$$S = \frac{22,112}{43,560} \times 2.0 \text{ and } S = 1.0 \text{ qt} = \frac{\text{amount of}}{\text{into the system}}$$

# **Special Instructions for Chemigation**

- 1. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.
- DO NOT connect an irrigation system used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.
- 3. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- 4. Recirculate and/or contain tail water (runoff water) from chemigation that contains **Prowl H2O** in the field in a cistern or holding reservoir from the initial application and/or use only on adjacent, approved crops for which **Prowl H2O** is registered for this type of application.
- 5. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. It must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is automatically or manually shut down.
- 6. The sprinkler chemigation system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. In addition, systems must use a metering pump, including a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7. The sprinkler chemigation system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 8. The irrigation line or water pump must include a functional pressure switch that will stop the water pump

motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

# Chemigation Systems Connected to Public Water Systems

- 1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- 2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- All chemigation systems connected to public water systems must also follow restrictions listed in the preceding sections involving **Chemigation**.

# Application via Flood, Flooded Basin, or Gravity Flow Irrigation Systems

**Prowl® H2O herbicide** may be applied via flood, flooded basin, or gravity flow irrigation systems, but only to the following crops: alfalfa, bearing and nonbearing fruit and nut trees, bearing and nonbearing bushberries and caneberries, bearing and nonbearing olive trees, bearing and nonbearing vineyards, bearing and nonbearing small fruit climbing vines, nonbearing date palm, and nonbearing fig trees.

# Use Instructions and Restrictions for Flood, Flooded Basin, and Gravity Flow Irrigation

- Prowl H20 may be applied through flood, flooded basin, or gravity flow irrigation systems designed to uniformly distribute irrigation water along the soil surface. Solid set systems using tall riser for overhead application are excluded.
- 2. Follow all label directions for **Prowl H2O** regarding rates per acre, timing of application, and crop-specific restrictions and precautions.
- DO NOT connect an irrigation system used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.
- 4. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- 5. BASF recommends that **Prowl H2O** is mixed with water at a 1:1 ratio in the injection nurse tank to assist with product flowability. Maintain agitation in the injection nurse tank to keep a uniform herbicide

- suspension during application. When application is complete, flush the system with water.
- 6. Systems using a gravity-flow pesticide dispensing system must meter the pesticide in the water at the head of the field downstream of a hydraulic discontinuity, including a drop structure or weir box, to decrease potential for water source contamination from backflow water.
- 7. Tail water (runoff water) from flood, flooded basin, or gravity flow irrigation that contains **Prowl H2O** must be recirculated and/or contained in the field in a cistern or holding reservoir from the initial application and/or used only on adjacent approved crops for which **Prowl H2O** is registered for this type of application.
- 8. Systems using a pressurized water and pesticide injection system must meet the following requirements:
  - The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located in the irrigation pipe to prevent water source contamination from backflow.
  - The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent flow of fluids back toward the injection pump.
  - The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is automatically or manually shut down.
  - The system must contain a functional interlocking control to automatically shut off the pesticide injection pump when the water pump stops.
  - The irrigation pipe or water pump must include a functional pressure switch, which will stop the pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
  - Systems must use a metering pump, including a
    positive displacement injection pump (e.g. diaphragm
    pump) of effective design and constructed of materials that are compatible with pesticides and capable
    of being fitted with a system interlock.
  - Any alternative to the above safety devices must conform to the list of EPA-approved alternative devices.
- 9. Regularly measure the flow in the field to ensure the correct amount of **Prowl H2O** is metered into irrigation water and also regularly monitor to ensure treated water is uniformly distributed across the field. Flow rates through metering devices and distribution of **Prowl H2O** can vary with water temperature and speed of water flow across the field.
- Uniform distribution of **Prowl H2O**-treated irrigation water is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness, or illegal pesticide residues in the crop.
- 11. For questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts.

# **Spray Drift Advisories**

The applicator is responsible for avoiding off-site spray drift. Be aware of nearby nontarget sites and environmental conditions.

# Importance of Droplet Size

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

# **Controlling Droplet Size – Ground Boom**

- Volume Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

### **Controlling Droplet Size - Aircraft**

Adjust Nozzles - Follow nozzle manufacturer's recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

### **Boom Height - Ground Boom**

For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### Release Height - Aircraft

Higher release heights increase the potential for spray drift.

### **Shielded Sprayers**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

# Temperature and Humidity

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

#### **Temperature Inversion**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

#### Wind

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### **Additives**

Spray adjuvants have little or no influence on performance of **Prowl® H2O herbicide** when applications are made before weed emergence. However, several tank mixes with **Prowl H2O** require adjuvants to improve burndown of emerged weeds. Therefore, surfactants, liquid fertilizer (28%, 30%, or 32% UAN [urea ammonium nitrate] or AMS [ammonium sulfate]), or crop oil concentrate (COC) may be used with **Prowl H2O** tank mixes applied preplant, preemergence, or early postemergence to the crop. Follow the adjuvant directions on the tank mix partner's label. The adjuvants must contain ingredients accepted by the Environmental Protection Agency.

When an adjuvant is to be used with this product, BASF recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

# **Tank Mixing Information**

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Prowl H20** may be tank mixed or applied sequentially with other herbicide products registered for use in any labeled crop found in this label for a broader spectrum of residual weed control and/or control of emerged weeds. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use on the labeled crop. Read and follow tank mix product labels for application instructions, use restrictions and precautions, and rotational cropping guidance. The most restrictive labeling applies to tank mixes. Always perform a mixing test to check the compatibility of **Prowl H20** with all potential tank mix partners.

# **Mixing Instructions**

 Fill tank 1/2 to 3/4 full with clean water or liquid fertilizer and agitate. Before mixing **Prowl H2O** or **Prowl H2O** tank mixes in liquid fertilizer, refer to appropriate label sections for specified uses in liquid fertilizer, application instructions, and compatibility determinations.

**NOTE: Prowl H2O** will **NOT** mix in high salt formulation fertilizers, including 10-34-0. When using high salt formulation fertilizers as the spray carrier, use **one** of the following:

- a. Pre-slurry **Prowl H2O** in water before adding to tank; use 1:1 ratio of water to **Prowl H2O**.
- b. Add water to fertilizer solution before adding **Prowl H20**. The amount of water should be equal to

or more than the amount of **Prowl® H2O herbicide** to be used.

#### 2. Prowl H2O Alone

When using **Prowl H2O** alone, add **Prowl H2O** to the partially filled tank while agitating; then fill the remainder of the tank with water or liquid fertilizer.

#### 3. Prowl H2O Tank Mixes

Add the tank mix ingredients in the following order before adding **Prowl H2O**:

- a. **Wettable Powder (WP) formulations.** Make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
- b. **Dry Flowable (DF)/Water-dispersible Granule (WDG) formulations.** Add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.
- c. **Flowable (F) formulations.** Add the F formulation to the partially filled tank while agitating.
- d. Add **Prowl H2O** to the partially filled tank while agitating.
- e. Water-soluble Concentrate (WSC) formulations.

  Add the WSC formulation to the partially filled tank while agitating.
- f. Emulsifiable Concentrate (EC) formulations. Add the EC formulation to the partially filled tank while agitating.

Fill the remainder of the tank with water or liquid fertilizer while agitating.

4. Thorough and continuous sprayer-tank agitation MUST be maintained during mixing and spraying of Prowl H2O. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed.

### **Cleaning Spray Equipment**

Clean application equipment thoroughly by using a strong detergent or commercial spray cleaner according to the manufacturer's directions; then triple rinse the equipment before and after applying this product.

# **Use Precautions**

- Prowl H2O will not control established weeds. Destroy emerged weeds before application.
- Prowl H2O is most effective in controlling weeds when mechanically incorporated or when incorporated into the weed germination zone by adequate rainfall or overhead irrigation after application.
- In the event of a crop loss because of adverse weather conditions or other reasons, any crop registered for a preplant incorporated application of **Prowl H2O** can be replanted without adverse effects the same year (see **Crop-specific Information** for exceptions). If replanting is necessary, **DO NOT** work the soil deeper than the treated zone.
- Refer to Crop-specific Information for crop-specific preharvest intervals and feeding and grazing restrictions.

### **Use Area**



# **Rotational Crop Restrictions**

- Use of Prowl H2O in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors, including arid conditions, make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible. Soil characteristics and environmental conditions which may contribute to crop stress that may be accentuated by the use of Prowl H2O include: coarse soils, compaction, high salinity, eroded knolls/hilltops, cold and/or wet soils, drought, and heavy rainfall soon after application.
- When Prowl H2O is used in tank mix or sequential combinations, refer to label of other herbicides for additional rotational crop restrictions.
- After harvest of furrow-irrigated crops, thoroughly mix the soil by plowing or deep disking to minimize the potential for herbicide carryover to the following crop.
- Refer to Crop-specific Information for specific rotational restrictions when Prowl H2O is applied to specific crops.
- Restrictions for rotational cropping after the use of Prowl H2O depend on the application use rate of Prowl H2O in the primary crop. The user must thoroughly read the following restrictions to determine the rotational crops for the specific situation, according to application use rate. For field and row crops, see the table following.

### Orchard, Grove, and Vineyard Crops

In the growing season after application of **Prowl H2O** to bearing fruit and nut trees, bushberries, caneberries, or grapes, plant only those crops for which **Prowl H2O** is labeled for preplant incorporated treatment or crop injury may occur. **DO NOT** rotate to other crops (except for fruit and nut trees, bushberries, caneberries, or grapes) for 24 months after **Prowl H2O** application.

# **Field and Row Crops**

Rotational Crops	States	Prowl® H2O herbicide Rate (pts/A)	Rainfall + Irrigation Amount (inches) between Prowl H2O application and	Rotational Planting Interval (months) after Prowl H2O application	
		,	rotational crop planting	Spring	Fall
All crops labeled for preplant incorporated application	All	> 4.0	_	the i	
All other crops			_	2	4
Cotton, Edible beans, Fruiting vegetables, Lentil, Peas, Peanut, Safflower, Soybean, Sunflower (and other Group 20B Oilseeds), Vegetable soybean	All	≤ 4.0	_	C	)
Alfalfa stand establishment	All	≤ 4.0	> 12	6	6
Wheat*, Barley*	Colorado, Idaho, Kansas, Montana,	≤ 3.2	_	۷	ļ
	Nebraska, Nevada, Oregon, Utah, Washington, Wyoming	> 3.2 but ≤ 4.0	> 12	4	
			< 12	12	14
	All ather states	All other states ≤ 4.0	> 12		ļ
	All Other States		< 12	12	14
Proso millet, Grain sorghum, Annual or perennial grass crops or	Minnesota, North Dakota, South Dakota	≤ 4.0	_	18	20
mixtures	All other states	r states ≤ 4.0	> 20	10	12
	All other states		< 20	18	20
Red beet**, Spinach**	All	≤ 4.0	> 12	12	14
	All	≤ 4.0	< 12	18	20
Sugar beet**	Nebraska, and	≤ 2.6	> 12 and only if cropland is under center pivot irrigation	10	14
	counties Goshen, Laramie, Platte in	> 2.6 but ≤ 4.0		12	14
	Wyoming	≤ 4.0	< 12	18	20
	All other states and other counties in Wyoming	≤ 4.0	> 12	12	14
			< 12	18	20
All other crops	All	≤ 4.0	> 12	12	12
	All		< 12	18	20

<sup>\*</sup> In dryland areas and/or areas where irrigation is necessary to produce the crop, **DO NOT** plant winter wheat or barley as a followcrop if crop failure/destruction occurs and land is fallowed during the summer.

<sup>\*\*</sup>To ensure thorough mixing of soil before planting sugar beet, red beet, and spinach, land should be plowed using a moldboard plow to a depth of 12 inches.

# **Crop-specific Information**

Crop Injury. Prowl® H2O herbicide use may result in crop injury, loss or damage to certain crops under a number of conditions, including but not limited to agronomic, cultural, mechanical, and environmental. Numerous risks of loss or damage to certain crops may be associated with the use of Prowl H2O even when directions for use are followed completely. The user or grower should take all such risks into consideration before deciding to apply the product. BASF recommends testing on a small portion of the target crop to determine if damage is likely to occur. Each grower who is considering the product for such use should test Prowl H2O to determine its suitability. A grower should use Prowl H2O only to the extent that, in his sole opinion, the benefit of Prowl H2O use outweighs the potential injury to the grower's crop.

In addition, many factors can affect crop growth and/or yield, including but not limited to insects, diseases, weed competition, poor seed quality, improper planting depth, mechanical cultivation, poor weather (including freezing or excessive wind, rain, heat, or cold), lack of or excessive moisture, crusting, fertility, or hardpans. Risk of loss or damage to crops may be associated with the use of **Prowl H2O** and contribute to poor stands because of failure of crop to emerge, swelling of roots or other belowground plant parts, less vigorous plant growth and development, and reduction in yield potential. **Prowl H2O** may also cause injury to sensitive rotational crops.

# **African Marigold**

**Prowl H20** is only registered for use in African marigold grown for the purpose of lutein and zeaxanthin extraction.

**Prowl H2O** may be applied by ground, chemigation, or on dry bulk fertilizer.

Plant African marigold 1/4-inch to 3/4-inch deep and completely cover with soil. Make sure that crop seeds are below the tilled soil surface area.

#### Use Method, Rate, and Timing

**Prowl H20** may be applied in a single application or sequentially with an interval of 30 days or more.

Uniformly apply **Prowl H2O** up to 4.2 pints per acre as a broadcast treatment before target-weed germination.

**Preplant Incorporated.** Apply **Prowl H2O** within 60 days of planting and incorporate.

**Preemergence.** Apply **Prowl H2O** at planting or up to 2 days after planting, but before crop emerges. Apply to a seedbed that is firm and free of clods.

**Postemergence.** Apply **Prowl H2O** over-the-top postemergence after crop emergence for residual weed control.

**Postemergence-directed.** Apply **Prowl H2O** as a postemergence-directed spray on the soil at the base of established plants, beneath plants, and between rows for

residual weed control. Avoid direct contact with foliage or stems.

Postemergence and postemergence-directed treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received after application. If sufficient rainfall or irrigation does not occur to activate the herbicide, mechanically incorporate. Apply **Prowl H2O** before weeds germinate or after clean cultivation to remove existing weeds because **Prowl H2O** will not control emerged weeds. Apply a postemergence herbicide to control emerged weeds.

### **Crop-specific Restrictions**

- **DO NOT** apply more than 4.2 pints of **Prowl H2O** per acre in a single application.
- **DO NOT** apply more than a maximum cumulative total of 8.4 pints of **Prowl H2O** per acre per year.
- **DO NOT** graze livestock in treated fields or feed treated plant materials to animals.

#### **Crop-specific Precautions**

- Avoid overlapping spray patterns because crop injury can occur.
- Avoid heavy residue on soil surface from previous year's crops.
- Avoid applying **Prowl H2O** to open furrows with exposed seed.

# Alfalfa (grown for Forage, Hay, or Seed)

**Prowl H20** may be applied by ground; air; chemigation; flood, flooded basin, and gravity flow irrigation systems; or on dry bulk fertilizer.

# Use Method, Rate, and Timing Established Alfalfa for Forage/Hay and Seed

**Production.** Apply to established alfalfa grown for forage or hay or seed production (defined as alfalfa planted in the fall or spring which has gone through a first cutting/mowing). Apply in a single application or in sequential applications. Uniformly apply **Prowl H2O** at a broadcast rate of 1.1 to 4.2 quarts per acre before weed germination. Application can be made in the fall after the last cutting/mowing, during winter dormancy, in the spring, or between cuttings. Apply before alfalfa reaches 6 inches in regrowth.

**Seedling Alfalfa.** Apply to seedling alfalfa grown for forage or hay or seed production (defined as alfalfa planted in the fall or spring which has **NOT** gone through a cutting/mowing/seed harvest). Uniformly apply **Prowl H2O** at a broadcast rate of 1.1 to 2.1 pints per acre before weed germination. Application can be made when seedling alfalfa has reached the second trifoliate growth stage. Apply before alfalfa reaches 6 inches in growth.

**Alfalfa Stand Establishment.** Apply **Prowl H2O** at a broadcast rate of 1.0 to 1.5 pints per acre as a preplant incorporated or preemergence treatment in direct-seeded alfalfa. Some crop stand reduction and stunting may occur with this use of **Prowl H2O**; however, reduced weed

competition will allow establishment of a quality stand. Use lower rates on coarse-texture soil or in lower rainfall areas (receiving less than 20 inches of rainfall and irrigation a vear).

- Preplant Incorporated. Uniformly incorporate
   Prowl® H2O herbicide into the top 2 to 3 inches of the final seedbed before planting.
- **Preemergence.** Apply directly after drill seeding alfalfa. Alfalfa should be planted into a seedbed that is firm and free of clods.

# **Chemigation Application**

**Prowl H20** may be applied through sprinkler irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label.

# Flood, Flooded Basin, and Gravity Flow Irrigation Systems

**Prowl H20** may be applied in flood, flooded basin, and gravity flow irrigation systems. Follow all directions, special instructions, and restrictions about flood, flooded basin, and gravity flow irrigation systems in the **Application Instructions** section of this label.

# **Crop-specific Restrictions**

- **DO NOT** apply more than 4.2 quarts of **Prowl H2O** per acre in a single application.
- For multiple applications, **DO NOT** apply more than a maximum cumulative total of 4.2 quarts of **Prowl H2O** per acre in any one crop season.
- Preharvest Interval (PHI) for alfalfa forage and hay
   14 days
- Preharvest Interval (PHI) for alfalfa seed 90 days

#### **Crop-specific Precautions**

- Some stunting and chlorosis of the alfalfa may occur with postemergence applications.
- Application made after alfalfa exceeds 6 inches in height may result in poor weed control because of possible reduced spray coverage to the soil.

### **Artichoke**

Prowl H2O may be applied by ground or air.

### Use Method, Rate, and Timing

**Prowl H20** must be applied pre-transplant, at least 1 to 2 days before transplanting artichoke. For a single application, uniformly apply **Prowl H20** up to 3.0 pints per acre as a broadcast spray to the soil surface at least 60 days before harvest, or uniformly apply 3.1 to 8.2 pints per acre as a broadcast spray to the soil surface at least 200 days before harvest.

#### **Crop-specific Restrictions**

- **DO NOT** apply postemergence over the top of or to foliage of artichoke because severe injury may occur.
- **DO NOT** apply more than 3.0 pints per acre per season when using the 60-day preharvest interval.

- If more than 3.0 pints per acre (up to 8.2 pints per acre) of **Prowl H2O** is applied, **DO NOT** harvest artichoke until 200 days after application.
- **DO NOT** apply more than 8.2 pints per acre per season.
- **DO NOT** feed forage or graze livestock in treated fields.

# **Asparagus**

Prowl H2O may be applied by ground or air.

#### Use Method, Rate, and Timing

Apply **Prowl H2O** only to established asparagus or to newly planted crown asparagus. **DO NOT** apply to newly seeded asparagus. When applying to newly planted crown asparagus, assure crowns are fully covered with 2 to 4 inches of soil.

With a single application, uniformly apply **Prowl H2O** to asparagus up to 8.2 pints per acre as a broadcast spray to the soil surface at least 14 days before the first spear harvest or after seasonal harvest is complete. Application must be made before spear emergence or remove emerged spears before making the application. If asparagus is grown on sandy soils, **DO NOT** apply **Prowl H2O** at more than 2.4 pts/A.

# **Crop-specific Restrictions**

- DO NOT apply postemergence over the top of emerged spears or severe injury may occur.
- DO NOT apply more than 8.2 pints per acre per season.
- Preharvest Interval (PHI) 14 days
- **DO NOT** feed forage or graze livestock in treated fields.
- **DO NOT** apply by chemigation methods.

# Bearing and Nonbearing Fruit and Nut Trees

**Prowl H20** may be applied in the following individual crops within the fruit tree and tree nut crop groups:

#### **Citrus Fruit Crop Group** New Guinea wild lime Australian desert lime Australian finger lime Orange, sour Orange, sweet Australian round lime Brown River finger lime Pummelo Calamondin Russell River lime Citron Satsuma mandarin Citrus hybrids Sweet lime Grapefruit Tachibana orange Japanese summer grapefruit Tahiti lime Kumquat Tangelo Tangerine (mandarin) Lemon Lime Tangor Mediterranean mandarin Trifoliate orange Mount White lime Uniq fruit

Tree Nuts Crop Group		
African nut-tree Almond Beech nut Brazil nut Brazilian pine Bunya Bur oak Butternut Cajou nut Candlenut Cashew Chestnut	Coquito nut Dika nut Ginkgo Guiana chestnut Hazelnut (filbert) Heartnut Hickory nut Japanese horse-chestnut Macadamia nut Mongongo nut Monkey-pot	Okari nut Pachira nut Peach palm nut Pecan Pequi Pili nut Pine nut Pistachio Sapucaia nut Tropical almond Walnut, black Walnut, English
Chinquapin Coconut	Monkey puzzle nut	Yellowhorn

Pome Fruits Crop Group	Stone Fruits Crop Group	
Apple Azarole Crabapple Loquat Mayhaw Medlar Pear Pear, Asian Quince Quince, Chinese Quince, Japanese Tejocote	Apricot Apricot, Japanese Capulin Cherry, black Cherry, Nanking Cherry, sweet Cherry, tart Jujube, Chinese Nectarine Peach Plum Plum, American Plum, Canada Plum, Canada Plum, Chickasaw Plum, Damson Plum, Japanese Plum, Klamath Plum, prune Plumcot Sloe	
Other Fruit Trees		
Olive, Pomegranate		
Date palm*, Fig* (nonbearing only)		

<sup>\*</sup> Not for use in California except as directed in supplemental labeling

**Prowl® H2O herbicide** may only be applied by ground; chemigation; or flood, flooded basin, and gravity flow irrigation systems.

#### Use Method, Rate, and Timing

**Prowl H2O** may be applied in a single application or sequentially with an interval of 30 days or more. Apply **Prowl H2O** at 2.1 to 6.3 quarts per acre per application depending on the grower's weed control program, level of weed infestation, and desired use strategy, but not more than a total of 4.2 quarts/A per year in olive, pome, pomegranate, and stone fruit trees, and not more than a total of 6.3 quarts/A per year in citrus and nut trees, and nonbearing date palm and nonbearing fig trees.

#### **Ground Application (Bearing)**

**Prowl H2O** may be applied **surface incorporated** or **(surface) preemergence**.

Apply **Prowl H2O** broadcast or banded using ground equipment before weed germination. Apply spray directly to the ground beneath trees and/or in areas between rows. **DO NOT** apply over the top of trees with leaves, buds, or fruit. Contact by the spray mixture with leaves, shoots, or buds may cause injury or result in illegal pesticide residues on fruit.

# **Ground Application (Nonbearing)**

**Prowl H20** may be applied for preplant incorporated, preplant surface, surface incorporated, or preemergence weed control in several nonbearing fruit and nut tree crops. **Prowl H20** may be used before or after transplanting nonbearing crops.

**Preplant Surface.** Before transplanting, uniformly apply with ground equipment. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

**Preplant Incorporated.** Uniformly apply **Prowl H2O** before transplanting but before weeds germinate. Incorporate **Prowl H2O** to a depth of 1 to 2 inches. Application and incorporation must be made before transplanting to avoid mechanical injury to the crop. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

**Preemergence.** Application may be in a band or broadcast.

#### **Chemigation Application**

**Prowl H20** may be applied through sprinkler irrigation and drip irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label. **DO NOT** apply **Prowl H20**-treated irrigation water over the top of trees with leaves, buds, or fruit. Contact with leaves, shoots, or buds by spray mixture may cause injury or result in illegal pesticide residues on fruit.

# Flood, Flooded Basin, and Gravity Flow Irrigation Systems

**Prowl H20** may be applied in flood, flooded basin, and gravity flow irrigation systems. Follow all directions, special instructions, and restrictions about flood, flooded basin, and gravity flow irrigation systems in the **Application Instructions** section of this label.

# **Crop-specific Restrictions**

- DO NOT apply more than 4.2 quarts of Prowl H2O per acre per year in olive, pome, pomegranate, and stone fruit trees.
- **DO NOT** apply more than 6.3 quarts of **Prowl H2O** per acre per year in citrus and nut trees, and nonbearing date palm and nonbearing fig trees.
- DO NOT apply by air.
- DO NOT feed forage or graze livestock in treated groves or orchards.

- Preharvest Interval (PHI) for citrus fruit 1 day
- **Preharvest Interval** (PHI) for olive, pome, pomegranate, stone fruit, and tree nuts 60 days
- **DO NOT** apply to newly seeded nursery stock.

# Bearing and Nonbearing Bushberries and Caneberries

**Prowl® H2O herbicide** may be applied in the following individual crops within the bushberry crop group:

Aronia berry Gooseberry

Blueberry, highbush Honeysuckle, edible

Blueberry, lowbush Huckleberry
Buffalo currant Jostaberry

Chilean guava Juneberry (Saskatoon berry)

Cranberry, highbush Lingonberry
Currant, black Native currant
Currant, red Salal

lelegie eggs

Elderberry Sea buckthorn European barberry

**Prowl H20** may be applied in the following individual crops within the caneberry crop group:

Blackberry Raspberry, red Loganberry Raspberry, wild

Raspberry, black

**Prowl H20** may only be applied by ground; chemigation; or flood, flooded basin, and gravity flow irrigation systems.

#### Use Method, Rate, and Timing

Prowl H2O may be applied in a single application or sequentially with an interval of 30 days or more. Apply Prowl H2O at 2.1 to 6.3 quarts per acre depending on the grower's weed control program, level of weed infestation, and desired use strategy. For newly (less than 1 year) transplanted bushberry and caneberry plants, apply Prowl H2O at between 2.1 and 3.2 quarts per acre after transplanting. For established (at least 1 year after transplanting) plants, apply Prowl H2O at between 2.1 and 6.3 quarts per acre.

# **Ground Application (Bearing)**

**Prowl H2O** may be applied **surface incorporated** or **(surface) preemergence**.

Apply **Prowl H2O** as a broadcast or banded treatment using ground equipment before weed germination. Apply spray directly to the ground beneath the bushes or canes and/or in areas between rows or trellised rows. **DO NOT** apply over the top of bushes, canes, or primocanes with leaves, buds, or fruit. Contact by the spray mixture with leaves, shoots, or buds may cause injury.

**Prowl H20** may also be broadcast applied to (wild) lowbush blueberry after pruning in fall or spring but before new growth/emergence in spring, or broadcast applied over the top of dormant bushes before new growth/ emergence in spring. **DO NOT** apply broadcast over the top of (wild) lowbush blueberry if new spring growth/ emergence is imminent.

#### **Ground Application (Nonbearing)**

**Prowl H2O** may be applied for preplant incorporated, preplant surface, surface incorporated, or preemergence weed control in nonbearing bushberry and caneberry crops. **Prowl H2O** may be applied before transplanting or applied after transplanting and the establishment of the nonbearing crops. **Prowl H2O** may be used after transplanting the nonbearing crops and after the ground is settled and no soil cracking is present at 2.1 to 3.2 quarts per acre.

**Preplant Surface.** Before transplanting, uniformly apply with ground equipment. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

**Preplant Incorporated.** Uniformly apply **Prowl H2O** before transplanting but before weeds germinate. Incorporate **Prowl H2O** to a depth of 1 to 2 inches. Application and incorporation must be made before transplanting to avoid mechanical injury to the crop. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

**Preemergence.** Application may be in a band or broadcast.

# **Chemigation Application**

**Prowl H20** may be applied through sprinkler irrigation and drip irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label. **DO NOT** apply **Prowl H20**-treated irrigation water over the top of bushes, canes, or primocanes with leaves, buds, or fruit. Contact with leaves, shoots, or buds by spray mixture may cause injury.

# Flood, Flooded Basin, and Gravity Flow Irrigation Systems Application

**Prowl H20** may be applied in flood, flooded basin, and gravity flow irrigation systems. Follow all directions, special instructions, and restrictions about flood, flooded basin, and gravity flow irrigation systems in the **Application Instructions** section of this label.

#### **Crop-specific Restrictions**

- DO NOT apply more than 6.3 quarts of Prowl H2O per acre per year.
- DO NOT apply by air.
- DO NOT apply to newly (less than 1 year) transplanted bushberries and caneberries until ground is settled and no soil cracking is present.
- DO NOT apply more than 3.2 quarts of Prowl H2O per acre per year in newly (less than 1 year) transplanted bushberries and caneberries.
- DO NOT feed forage or graze livestock in treated field or planting.
- Preharvest Interval (PHI) 30 days
- DO NOT apply to newly seeded nursery stock.

# **Crop-specific Precautions**

 Prowl H2O inhibits root growth and development and should not be used if bushberry and caneberry roots are shallow or if root growth is inhibited or stressed due to pathogens, insects, or environmental factors.

# **Bearing and Nonbearing Grape**

**Prowl® H2O herbicide** may be only applied by ground; chemigation; or flood, flooded basin, and gravity flow irrigation systems.

# Use Method, Rate, and Timing

**Prowl H20** may be applied in a single application or sequentially with an interval of 30 days or more. Uniformly apply **Prowl H20** in grape vineyards at 2.1 to 6.3 quarts per acre depending on the grower's weed control program, level of weed infestation, and desired use strategy.

Prowl H2O may be applied anytime after fall harvest, during winter dormancy, in spring, and in season before harvest.

### **Ground Application (Bearing)**

**Prowl H2O** may be applied **surface incorporated** or **(surface) preemergence**.

Apply **Prowl H2O** broadcast or banded using ground equipment before weed germination. Apply spray directly to the ground beneath grape vines and/or in areas between rows. **DO NOT** apply over the top of grape vines with leaves, buds, or fruit. Contact with leaves, shoots, or buds by the spray mixture may cause injury or result in illegal pesticide residues on fruit.

# **Ground Application (Nonbearing)**

**Prowl H20** may be applied for preplant incorporated, preplant surface, surface incorporated, or preemergence weed control in nonbearing vineyards. **Prowl H20** may be used before or after transplanting.

**Preplant Surface.** Before transplanting, uniformly apply with ground equipment. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

**Preplant Incorporated.** Uniformly apply **Prowl H2O** before transplanting but before weeds germinate. Incorporate **Prowl H2O** to a depth of 1 to 2 inches. Application and incorporation must be made before transplanting to avoid mechanical injury to the crop. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

**Preemergence.** Application may be in a band or broadcast.

### **Nonbearing Grape**

# **Newly Transplanted and One-year-old Grapevines:**

- DO NOT allow spray to contact buds or leaves or leaf distortion may occur.
- **DO NOT** apply to newly transplanted vines until ground has settled and no cracks are present.

#### **Chemigation Application**

**Prowl H20** may be applied through sprinkler irrigation and drip irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label. **DO NOT** apply **Prowl H20**-treated irrigation water over the top of

grape vines with leaves, buds, or fruit. Contact with leaves, shoots, or buds by spray mixture may cause injury or result in illegal pesticide residues on fruit.

# Flood, Flooded Basin, and Gravity Flow Irrigation Systems

**Prowl H20** may be applied in flood, flooded basin, and gravity flow irrigation systems. Follow all directions, special instructions, and restrictions about flood, flooded basin, and gravity flow irrigation systems in the **Application Instructions** section of this label.

# **Crop-specific Restrictions**

- DO NOT apply over the top of grape vines with leaves, buds. or fruit.
- DO NOT apply by air.
- DO NOT apply more than 6.3 quarts per acre per year.
- Preharvest Interval (PHI) 21 days
- Prowl H2O-treated vineyards (post-harvest) may be grazed by livestock.

# **Bearing and Nonbearing Small Fruit Climbing Vines**

**Prowl H20** may be applied in the following small fruit climbing vines: Amur river grape, gooseberry, fuzzy kiwifruit, hardy kiwifruit, maypop, and Schisandra berry.

**Prowl H20** may be only applied by ground; chemigation; flood, flooded basin, and gravity flow irrigation systems.

#### Use Method, Rate, and Timing

**Prowl H20** may be applied in a single application or sequentially with an interval of 30 days or more. Uniformly apply **Prowl H20** in small fruit climbing vines at 2.1 to 4.2 quarts per acre depending on the grower's weed control program, level of weed infestation, and desired use strategy.

**Prowl H20** may be applied anytime after fall harvest, during winter dormancy, and in spring.

# **Ground Application**

**Prowl H2O** may be applied **surface incorporated** or **(surface) preemergence**.

Apply **Prowl H2O** broadcast or banded using ground equipment before weed germination. Apply spray directly to the ground beneath small fruit climbing vines and/or in areas between rows. **DO NOT** apply over the top of small fruit climbing vines with leaves, buds, or fruit. Contact with leaves, buds, or fruit by the spray mixture may cause injury or result in illegal pesticide residues on fruit.

#### **Chemigation Application**

**Prowl H20** may be applied through sprinkler irrigation and drip irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label. **DO NOT** apply **Prowl H20**-treated irrigation water over the top of small fruit climbing vines with leaves, buds, or fruit. Contact with leaves, buds, or fruit by the spray mixture may cause injury or result in illegal pesticide residues on fruit.

# Flood, Flooded Basin, and Gravity Flow Irrigation Systems

**Prowl® H20 herbicide** may be applied in flood, flooded basin, and gravity flow irrigation systems. Follow all directions, special instructions, and restrictions about flood, flooded basin, and gravity flow irrigation systems in the **Application Instructions** section of this label.

### **Crop-specific Restrictions**

- **DO NOT** apply over the top of small fruit climbing vines with leaves, buds, or fruit.
- DO NOT apply by air.
- **DO NOT** apply more than 4.2 quarts per acre per year.
- Preharvest Interval (PHI) 60 days
- **DO NOT** feed forage or graze livestock in treated vines.
- DO NOT apply Prowl H2O when impregnated onto dry bulk fertilizer in small fruit climbing vines.

# **Brassica Head and Stem Vegetables**

**Prowl H20** may only be applied to the following Brassica head and stem vegetables:

Broccoli Chinese mustard cabbage

Chinese broccoli

Brussels sprouts

Cauliflower

Cavalo broccolo

Cabbage Kohlrabi

Chinese cabbage (napa)

Prowl H2O may be applied by ground or air.

#### Use Method, Rate, and Timing

Uniformly apply **Prowl H20** to Brassica head and stem vegetables by ground or air as a preplant surface application before transplanting or as a postemergence application.

Uniformly apply **Prowl H2O** only by ground as a postemergence-directed application to transplanted or established direct-seeded Brassica head and stem vegetables.

**DO NOT** apply before direct-seeded Brassica head and stem vegetables.

With a single application, apply up to 2.1 pints per acre of **Prowl H2O** to Brassica head and stem vegetables as a broadcast or banded spray to the soil surface at pretransplant time, as a broadcast postemergence foliar spray, or as a postemergence-directed spray between vegetable rows. Apply postemergence or postemergence-directed to 2-leaf to 4-leaf vegetable transplants at 1 to 3 days after transplanting, or to the 2-leaf to 4-leaf stage of direct-seeded vegetable plants.

Apply **Prowl H20** as a postemergence-directed spray on the soil, beneath plants, and between vegetative rows. **DO NOT** spray foliage or stems because crop injury will occur. Roots of transplants must be established. Following the postemergence-directed application if sufficient rainfall or irrigation does not occur, mechanically incorporate to activate the herbicide. Apply **Prowl H20** before weed germination. Emerged weeds will not be controlled by this treatment.

#### **Use Rate**

# Pretransplant, Postemergence, Postemergence-directed

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.0 to 1.5
Medium	1.5 to 2.1
Fine	1.5 to 2.1

#### **Crop-specific Restrictions**

- DO NOT apply more than 2.1 pints per acre per season.
- Preharvest Interval (PHI) for broccoli 60 days
- Preharvest Interval (PHI) for cabbage and other Brassica head and stem vegetables - 70 days
- **DO NOT** feed forage or graze livestock in treated fields.
- DO NOT apply via chemigation methods.

#### **Crop-specific Precautions**

- Avoid root contact with Prowl H2O-treated soil when placing transplants into furrow or hole, or crop injury may occur.
- Avoid overlapping spray patterns because crop injury can occur.
- Not for use in California.

# **Carrot**

**Prowl H20** may be applied by ground, air, or chemigation.

# Use Method, Rate, and Timing

**Preemergence.** Make a single broadcast application by ground, air, or chemigation at 2.0 pints per acre of **Prowl H2O** as a postplant treatment before emergence of the crop and before weed germination. Apply as a preemergence treatment within 2 days after planting.

Layby. Prowl H2O may be applied only by ground equipment at layby (last mechanical cultivation) at 2.0 pints per acre as a directed spray to the soil between rows. Apply Prowl H2O before weed germination. Emerged weeds will not be controlled by this treatment. DO NOT allow the spray to contact carrot plants or injury may occur. DO NOT apply layby applications by chemigation or air.

#### **Chemigation Application**

**Prowl H2O** may be applied through sprinkler irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label. **DO NOT** allow **Prowl H2O**-treated irrigation water to contact carrot plants.

**DO NOT** apply tank mixes through any type of irrigation system unless the label instructions on chemigation of all products are followed.

# **Crop-specific Restrictions**

- **DO NOT** apply more than 2.0 pints per acre per season.
- Preharvest Interval (PHI) 60 days
- **DO NOT** feed forage or graze livestock in treated fields.

- **DO NOT** apply as a broadcast spray over top of carrots or crop injury may result.
- **DO NOT** apply layby applications by chemigation or air.

#### **Carrot Grown for Seed Production**

**Prowl® H2O herbicide** may be applied only by layby with ground equipment.

# Use Method, Rate, and Timing

Last Cultivation (Layby). Apply Prowl H2O after the last normal mechanical cultivation (layby) at a rate of 1.0 to 4.0 pints per acre (on a broadcast basis). Uniformly apply as a directed spray to the soil between rows. DO NOT allow the spray to contact carrot plants or injury may occur. Use protective shields to avoid contact with carrot foliage. Use calibrated nozzles and equipment.

Layby application can be made to carrots previously treated with herbicides registered in/on carrots. Consult the labels of those herbicides for suggested treatments, rates, and precautions or restrictions for use in carrots and for rotational crop restrictions.

# **Crop-specific Restrictions**

- DO NOT apply as a broadcast spray over top of carrots or crop injury may result.
- **DO NOT** apply layby applications by chemigation or air.
- DO NOT apply within 60 days before carrot seed harvest
- **DO NOT** feed forage or graze livestock in treated fields.
- **DO NOT** harvest carrots for food or feed use.

#### **Special Crop Use Restrictions**

The pesticide applicator, the producer of the crop, and the seed conditioner must be aware that use of this product according to this labeling is deemed a nonfeed/nonfood use. If the applicator of this pesticide is not the producer, the applicator must provide a copy of this labeling to the producer of the crop. Producers of this crop who use this product, or cause the product to be used on a field they operate, shall provide a copy of this pesticide label to the seed conditioner.

Consequently, no portion of this carrot seed crop, including but not limited to green chop, hay, pellets, meal, whole seed, cracked seed, roots, bulbs, foliage, and seed screenings, may be used or distributed for food or feed purposes.

Processed carrot seed from a field treated with this product must bear a specific tag or conspicuous container labeling, or if shipped in bulk, on the shipment invoice or bill of lading, with the following statement: "Not for human consumption or animal feed." All seed screenings from seed processing shall be disposed of in such a manner that the screenings cannot be distributed or used for human food or animal feed purposes.

The seed conditioner shall keep records of screening disposal for three years from the date of disposal and shall furnish the records immediately upon request. Conditioner disposal records shall consist of documentation of on-farm

disposal, disposal at a controlled dumpsite, incinerator, composter, or other equivalent disposal site and shall include the lot numbers, amount of material disposed of, the grower(s), and the date of disposal.

# Celery (and other leaf petiole vegetables in Group 22B)

**Prowl H20** may be applied to celery and the following other leaf petiole vegetables of subgroup 22B:

Cardoon Rhubarb
Chinese celery Udo
Fuki Zuiki

Prowl H2O may only be applied by ground or air.

#### Use Method, Rate, and Timing

**Pre-transplant.** Uniformly apply **Prowl H2O** as a broadcast spray to celery and other leaf petiole vegetables as a preplant surface application before transplanting. **DO NOT** incorporate **Prowl H2O** into soil before transplanting. **DO NOT** apply before direct-seeded celery and other leaf petiole vegetables.

**Post-transplant.** Uniformly apply **Prowl H2O** as a postemergence broadcast spray to celery and other leaf petiole vegetables 1 or more days after transplanting until no less than 60 days before harvest.

**Sequential applications. Prowl H20** may be applied in sequential applications with pretransplant followed by post-transplant. Separate applications by at least 21 days and **D0 NOT** exceed the maximum cumulative rate for soil type per year.

#### **Use Rate**

### Pretransplant, Postransplant

Soil Texture	Broadcast Rate (pts/A)
Coarse (mineral)	2.1 to 3.2
Medium (mineral)	2.1 to 3.2
Fine (mineral)	2.1 to 3.2
Muck	4.0

### **Crop-specific Restrictions – Mineral Soils**

- DO NOT apply more than 3.2 pts (1.5 lbs of pendimethalin) of Prowl H2O per acre in a single application.
- **DO NOT** apply more than 6.4 pts (3.0 lbs of pendimethalin) of **Prowl H2O** per acre per year.
- Preharvest Interval (PHI) 60 days

# **Crop-specific Restrictions – Muck Soils**

- DO NOT apply more than 4.0 pts (1.9 lbs of pendimethalin) of Prowl H2O per acre in a single application.
- DO NOT apply more than 8.0 pts (3.8 lbs of pendimethalin) of Prowl H2O per acre per year.

• Preharvest Interval (PHI) – 60 days

#### **Crop-specific Precautions**

- Avoid root contact with Prowl® H2O herbicide-treated soil when placing transplants into furrow or hole, or crop injury may occur.
- Before applying Prowl H2O to transplanted celery and other leaf petiole vegetables, roots of plants must be established and plants must have regained full turgidity.

# Corn (Field, Field Seed, Fresh Sweet, Popcorn, and Popcorn Seed)

**Prowl H20** may be applied by ground, air, chemigation, or on dry bulk fertilizer. **Prowl H20** may be applied in conventional tillage, minimum tillage, or no-till as a preemergence, postemergence, or postemergence incorporated (CULTI-SPRAY) application in field corn.

**Prowl H20** may be applied in conventional tillage as a preemergence or postemergence application in field seed corn, popcorn, popcorn seed corn, and fresh sweet corn.

# Regardless of tillage system, plant corn at least 1-1/2 inches deep and completely cover with soil.

In conventional-tillage systems, plant into a seedbed that is firm and free of clods and trash. Use only where tillage provides good soil coverage of corn seed.

In no-till systems, use a no-till planter capable of planting through crop residue. Use of no-till planters under conditions that do not allow good soil coverage of the corn seed can result in reduced crop stand or injury if **Prowl H2O** contacts the germinating corn seed. Check equipment to ensure good seed coverage.

**Additional Weeds Controlled.** In addition to weeds listed in **Table 2**, **Prowl H2O** controls the following weeds in corn with CULTI-SPRAY application: wild proso millet and shattercane.

#### Use Method, Rate, and Timing

**Preemergence.** Apply after planting but before weeds germinate and crop emerges.

**Postemergence.** Apply postemergence until field corn is 30-inches tall (20-inches to 24-inches tall for popcorn, popcorn seed, field seed, and fresh sweet corn) or in the V8 growth stage, whichever is more restrictive. If the corn canopy prevents applications from reaching the soil, use drop nozzles and apply as a directed spray.

**CULTI-SPRAY.** Apply **Prowl H2O** alone or **Prowl H2O** plus atrazine when field corn is at least 4-inches tall until last cultivation (layby). **Prowl H2O** plus atrazine must be applied before the field corn reaches 12 inches in height. See specific directions for (CULTI-SPRAY) application under **Application Timings**.

**DO NOT** apply more than 1.2 lbs ai per acre of atrazine, as specified on the atrazine label. Under situations of low rainfall or soil moisture, when deep germinating weeds like shattercane or field sandbur are

anticipated, mechanical incorporation provides the best results. If cultivation is needed after application and incorporation of **Prowl H2O**, the depth of cut should be no deeper than the depth of cut used to incorporate.

#### **Chemigation Application**

**Prowl H20** may be applied through sprinkler irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label.

#### **Use Rate**

### Preemergence, Postemergence

	Organic Matter		
Soil Texture	< 1.5% (pts/A)	1.5% to 3.0% (pts/A)	> 3.0% (pts/A)
Coarse	2.0	3.0	3.0
Medium	3.0	3.0	4.0
Fine	3.0	4.0	4.0

#### **CULTI-SPRAY (Field Corn ONLY)**

Soil Texture	Southern States <sup>1</sup> (pts/A)	Northern States <sup>1</sup> (pts/A)
Coarse	1.5	2.0
Medium	2.0	3.0
Fine	3.0	3.0
<sup>1</sup> See <b>Use Precautions</b> for map of specific states.		

#### **Crop-specific Restrictions**

- **DO NOT** apply **Prowl H20** in reduced-tillage, minimum-tillage, or no-till fresh sweet corn, seed corn, or popcorn.
- DO NOT apply Prowl H2O in no-till in California.
- **DO NOT** apply preplant incorporated.
- **DO NOT** apply postemergence in liquid fertilizer.
- Livestock can graze or be fed forage from treated corn 21 days or more after application.

# **Crop-specific Precautions**

 Prowl H2O may be applied sequentially in a single crop season as long as the total use rate applied in the crop season does not exceed the highest rate per acre for any given soil type.

# Cotton

**Prowl H20** may be applied by ground, air, chemigation, or on dry bulk fertilizer to cotton (including those varieties with a herbicide-resistant trait) grown under conventional-tillage, minimum-tillage, or no-till systems, or on stale seedbeds.

**Additional Weeds Suppressed.** In addition to weeds listed in **Table 2**, **Prowl H2O** will suppress Russian thistle in the state of Arizona.

# Use Method, Rate, and Timing

**Fall Application. Prowl H20** may be applied for weed control in cotton in the fall, after October 15 (up to

140 days before planting cotton) in Arizona, California, Louisiana, Mississippi, New Mexico, Oklahoma, and Texas. Apply **Prowl® H2O herbicide** at the broadcast rate of 2.0 pints per acre on coarse or medium soils and 3.0 pints per acre on fine soils.

**Preplant Surface.** Apply **Prowl H2O** within 15 days of planting.

**Preplant Incorporated.** Apply **Prowl H2O** within 60 days of planting and incorporate.

**Preemergence.** Apply **Prowl H2O** at planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods.

Preplant Incorporated followed by Preemergence. Apply Prowl H2O within 60 days of planting and incorporate. Apply overlay application of Prowl H2O at planting or up to 2 days after planting. Total amount of Prowl H2O applied per acre cannot exceed the highest labeled rate for a given soil type. Preplant incorporated and preemergence applications of Prowl H2O may be applied with the labeled tank mix herbicide(s).

Layby Application (at last cultivation). Apply Prowl H2O directly to the soil between rows as a directed spray after the last normal cultivation (layby). Layby applications can be applied in cotton previously treated with Prowl H2O or any herbicide(s) registered for use in cotton. The total amount of Prowl H2O applied per acre per season cannot exceed the highest labeled rate for a given soil type. Prowl H2O may also be applied at layby in cotton with herbicide-resistant traits.

**Postemergence. Prowl H20** may be applied by ground or air as a broadcast over-the-top postemergence application in cotton, including those varieties with a herbicide-resistant trait.

Postemergence treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received after application. Apply **Prowl H2O** before weeds germinate or after clean cultivation to remove existing weeds because **Prowl H2O** will not control emerged weeds. Apply a postemergence herbicide to control emerged weeds.

Apply **Prowl H20** broadcast postemergence (in water) over the top of cotton after cotton reaches the 4-leaf growth stage, but not after the 8-leaf growth stage. Overthe-top applications made before the 4-leaf growth stage or after the 8-leaf growth stage may result in crop injury and/or yield loss.

**Prowl H2O** may also be tank mixed with herbicide products registered for use on cotton varieties with a herbicide-resistant trait. When tank mixing **Prowl H2O** with another herbicide product, always follow the most restrictive labeling pertaining to application rates, methods, timings and precautions. **DO NOT** tank mix and apply over-the-top postemergence with **Caparol® herbicide**, **Cotoran® herbicide**, **Dual® herbicide**, **Sequence® herbicide**, or **Staple® herbicide**.

Dry ammonium sulfate (AMS) at 17 lbs/100 gallons of spray solution must be used when tank mixing **Prowl H20** with glyphosate-containing products. Liquid AMS may also be used, but must be used at an equivalent rate to 17 lbs of dry weight AMS/100 gallons of spray solution. A nitrogen replacement should not be used with this tank mix unless specified as acceptable from BASF in writing. An appropriate mixing order is as follows: fill tank to at least 1/2 full with water; then add in order: AMS, **Prowl H20**, glyphosate; then fill the tank to capacity with water.

Over-the-top postemergence application of **Prowl H2O** can be applied in cotton previously treated with at-planting soil applications of **Prowl H2O** or any other soil-applied herbicide(s) registered for use in cotton. Consult the labels of those herbicides for suggested treatments, rates, precautions, or restrictions for use in cotton, and for rotational crop restrictions. Follow the most restrictive label instructions when using products in combination with soil-applied **Prowl H2O**.

**Precautions:** Postemergence application of **Prowl H2O** may cause temporary growth reduction and/or leaf discoloration or malformation of cotton after application.

**DO NOT** apply over the top in fluid fertilizer.

**DO NOT** apply in tank mix with any adjuvant, surfactant, oil, or other pesticide (except for cotton insecticides).

**DO NOT** apply in any manner except as described in this label or crop injury and/or yield reduction may occur.

**DO NOT** apply if cotton is under stress (including stress related to previous pesticide treatments, poor fertilization, environmental conditions, and/or pest damage) at time of application. If cotton is under stress (including stress related to previous pesticide treatments, poor fertilization, environmental conditions, and/or pest damage) at time of application, **Prowl H2O** may retard cotton recovery and/or adversely affect yield.

# **Chemigation Application**

**Prowl H20** may be applied through sprinkler irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label.

#### **Use Rate**

#### Preplant, Preemergence, Layby

Soil Texture	Conventional or Minimal Tillage (pts/A)	No-till** (pts/A)
Coarse	1.0 to 2.0*	2.0
Medium	2.0	3.0
Fine	3.0	4.0

<sup>\*</sup>DO NOT exceed 1.6 pts/A on coarse-texture soils in California.

<sup>\*\*</sup> **DO NOT** use on soils with more than 3% organic matter.

#### **Postemergence**

# Prowl® H2O herbicide Alone or in Tank Mix

Soil Texture	Conventional, Minimum, or No Tillage (pts/A)
Coarse	1.0 to 2.0*
Medium	1.5 to 2.0
Fine	2.0
*DO NOT exceed 1.6 pts/A on coarse-texture soils in California.	

#### **Crop-specific Restrictions**

- **DO NOT** apply postemergence in cotton in California.
- DO NOT apply Prowl H2O in no-till in California.
- **DO NOT** apply more than the highest seasonal rate per acre for any given soil type.
- DO NOT apply more than 2.0 pts/A of Prowl H2O (0.95 lb active ingredient/A) when applied postemergence to cotton for any given soil type.
- Preharvest Interval (PHI) 60 days
- In treated cotton fields, forage may be fed to or grazed by livestock.
- DO NOT apply more than the maximum cumulative seasonal rate of 4.2 pts of Prowl H2O per acre (2 lbs ai/A) for combined preplant/preemergence and postemergence applications.

# Dry Bulbs (Garlic, Onions, Shallots)

**Prowl H20** may be applied to the following dry bulb crops:

Daylily, bulb Onion, bulb

Fritillaria, bulb Onion, Chinese, bulb

Garlic, bulb Onion, pearl

Garlic, great-headed, bulb Onion, potato, bulb

Garlic, serpent, bulb Shallot, bulb

Lily, bulb

**Prowl H20** may be applied to direct-seeded and transplanted dry bulb onions and dry bulb shallots.

**Prowl H2O** may be applied by ground, air, or chemigation.

# Use Method, Rate, and Timing - Mineral Soils

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.5
Medium	2.0
Fine	3.2

**Preemergence.** After garlic planting but before crop and weeds emerge.

**Postemergence.** When garlic is in the 1st to 5th true-leaf growth stage.

**Split Application.** In garlic at both preemergence and postemergence timings.

In all states except California, apply Prowl H2O as a broadcast treatment when dry bulb onions or dry bulb shallots have 2 to 9 true leaves.

**In California,** apply **Prowl H2O** only as a single application when dry bulb onions or dry bulb shallots have 2 to 6 true leaves.

# **Additional State-specific Instructions**

Additional Use in Colorado, Kansas, and Nebraska Prowl H2O may be applied sequentially in seeded dry bulb onions. Make first application of Prowl H2O at loop stage. Make sequential application of Prowl H2O early postemergence (2nd to 9th true-leaf stage). DO NOT apply more than the maximum labeled rate for a given soil texture. DO NOT apply Prowl H2O at loop stage through the 9th true-leaf stage if heavy rains are expected or severe crop injury may result.

# Additional Use in Colorado and the High Plains of Texas

For transplanted dry bulb onions only, apply and shallow incorporate (less than 2-inches deep) **Prowl H2O** into preformed beds before transplanting.

Additional Use in Idaho, Oregon, and Washington Apply Prowl H2O as a broadcast treatment when dry bulb onions or dry bulb shallots are between the flag leaf to 9th true-leaf stage.

**Prowl H20** may be used at 3.0 to 4.0 pints per acre for dodder control on medium-texture and fine-texture soils.

**DO NOT** apply **Prowl H2O** using chemigation at the dodder control rate.

**Prowl H2O** may be applied in the fall or spring to the furrow area of land bedded in the fall in preparation for planting seed of dry bulb onions the following spring. Apply **Prowl H2O** as a banded application at rates based on appropriate soil texture. Band width is 1/2 the width of the row spacing. Keep **Prowl H2O** away from the area where dry bulb onion seed will be planted.

Harrow off tops of beds after **Prowl H20** furrow application before planting dry bulb onions.

For selective weed control in the onion row, apply **Prowl H2O** as a banded postemergence application to flag-leaf dry bulb onions at the labeled rates based on soil texture. Apply **Prowl H2O** only once to the furrow area and once to the dry bulb onion row as a postemergence application.

### Additional Use in Michigan

For mineral soils containing more than 10% organic matter, follow the directions for muck soils (see following).

# Crop-specific Restrictions (Mineral Soils)

- **DO NOT** mechanically incorporate except as specified for use on dry bulb onions in Colorado and the Texas High Plains.
- **DO NOT** apply more than 3.2 pints per acre per growing season (except Idaho, Oregon, and Washington).

- **Preharvest Interval** (PHI) 60 days in California; 45 days in all other states.
- **DO NOT** feed or graze these crops.
- DO NOT apply Prowl® H2O herbicide preemergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after Prowl H2O application at the preemergence through loop stage, DO NOT irrigate more than 1/2 inch of water.

**Use Method, Rate, and Timing - Muck Soils Prowl H2O** may be applied sequentially in dry bulb onions or dry bulb shallots on muck soils, only once preemergence and only twice postemergence, as follows:

Application Timing and Growth Stage	Rate (pts/A)
Preemergence through Loop Stage	4.0
Early Postemergence (2nd to 6th true-leaf stage)	4.0
Late Postemergence (6th to 9th true-leaf stage)	4.0

# **Crop-specific Restrictions (Muck Soils)**

- DO NOT apply to muck soils in California.
- Preharvest Interval (PHI) 45 days
- **DO NOT** feed or graze these crops.
- DO NOT apply more than 12.6 pints per acre per growing season on muck soils. To maximize crop safety, ensure good soil coverage during planting or transplanting and delay preemergence applications to the loop stage, if possible.
- DO NOT apply Prowl H2O preemergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after Prowl H2O application at the preemergence through loop stage, DO NOT irrigate more than 1/2 inch of water.
- DO NOT plant sugar beets, red beets, spinach, winter wheat, or winter barley as rotational crops on muck soils for 12 months from the time of last application if more than 3.2 pints per acre of **Prowl H2O** is applied to the onion crop.
- If loss of onion crop occurs, **DO NOT** replant any crop other than onions in muck soil during the same cropping year and **DO NOT** work the soil deeper than 2 inches.

#### **Chemigation Application**

**Prowl H20** may be applied through sprinkler irrigation systems. **DO NOT** irrigate more than 1/2 inch of water. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label.

# **Edible Beans**

**Prowl H20** may be applied to the following edible beans: dry beans [navy, great northern, red kidney, black, black turtle, cranberry, small white type, guar, adzuki, broad, faba, fava, field, lima (dry), pinto], lima bean, snap bean, chickpea (garbanzo bean), southern pea (cowpea), and sweet lupins.

**Prowl H2O** may be applied by ground, air, or on dry bulk fertilizer (only fall and preplant incorporated applications).

**Prowl H20** may only be applied (fall) preplant surface or preplant incorporated in dry beans, lima bean, snap bean, and southern pea (cowpea). **Prowl H20** may be applied (fall) preplant surface or preplant incorporated or (spring) preplant surface in chickpea (garbanzo bean). **Prowl H20** may be applied (fall) preplant surface or preplant incorporated or preemergence in sweet lupins.

# Use Method, Rate, and Timing Fall Application

For use only in Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington, and Wyoming). Apply Prowl H2O preplant surface or preplant incorporated (rainfall, irrigation, or mechanically) in late fall before planting edible beans [chickpea (garbanzo bean), dry beans, lima bean, snap bean, southern pea (cowpea), and sweet lupins] the following spring. Apply Prowl H2O in the late fall when soil temperatures are 45° F or below but before the ground freezes.

**DO NOT** apply when the air temperature is below 45° F.

Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected because factors like length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity.

#### Use Rate (Fall)1

Soil Texture	Broadcast Rate < 3% Organic Matter (pts/A)	Broadcast Rate > 3% Organic Matter (pts/A)
Coarse	2.0	2.0
Medium	2.5	3.0
Fine	3.0	3.0

<sup>&</sup>lt;sup>1</sup> Use limited to certain states. Follow state-specific instructions and/or restrictions.

**Preplant Incorporated.** Apply within 60 days of planting and incorporate.

**Preemergence.** Apply only to sweet lupins at planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods.

#### **Use Rate**

#### **Preplant Incorporated, Preemergence**

Southern	Northeri	n States¹	
Soil Texture	States <sup>1</sup> (pts/A)	< 3% Organic Matter > 3% (pts/A)	
Coarse	1.5	2.0	2.0
Medium	2.0	2.5	3.0
Fine	3.0	3.0	3.0
<sup>1</sup> See <b>Use Precautions</b> for map of specific states.			

#### **State-specific Instructions**

# Idaho, Montana, North Dakota, Oregon, and Washington

**Prowl® H2O herbicide** may be applied to chickpeas grown in no-tillage and/or minimum tillage systems in Idaho, Montana, North Dakota, Oregon, and Washington. Preplant surface applications must be made within 30 days of planting. **DO NOT** apply more than 1.5, 2.0, and 3.0 pts/A of **Prowl H2O** in coarse, medium, and fine texture soils, respectively. When planting, ensure the seed furrow is fully closed because conditions that allow the seed furrow to inadequately close and/or allow

**Prowl H2O** to contact the seed may result in crop injury. Certain unfavorable environmental conditions, including cool temperatures, excessive moisture after application, and wet and/or compacted soil conditions, may result in delayed emergence and stunting with **Prowl H2O** use in chickpea. Adequate rainfall or irrigation after application before weed seedling germination provides the most effective weed control. Herbicide performance from surface application may be decreased compared to soil incorporated application.

#### Idaho, Oregon, and Washington

**Prowl H2O** may be applied postplant preemergence only to chickpea grown in conventional tillage systems in Idaho, Oregon, and Washington. Application must be made within 2 days of planting. Apply up to but not more than 1.5 pts/A. Apply to a firm seedbed free of clods. Soil conditions that cause poor seed furrow closure and coverage may result in delayed emergence and stunting of the crop. Under certain environmental conditions, including cool temperatures, excessive moisture after application and wet soil conditions may result in delayed emergence and stunting with **Prowl H2O** use in chickpea. Adequate rainfall or irrigation after application before weed seedling germination provides the most effective weed control.

# Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Oregon, Washington, and Wyoming

Apply **Prowl H2O** by ground postplant preemergence to dry beans grown under sprinkler irrigation in Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Oregon, Washington, and Wyoming. Dry beans must have a minimum planting depth of 2 inches. Before applying Prowl H2O to dry beans, growers should check with their local seed company or seed supplier for sensitive varieties and to verify the selectivity of **Prowl H2O** on the grower's specific dry bean variety. **Prowl H20** application made postplant preemergence to dry beans must be immediately followed by 0.50 to 0.75 inch of water from overhead irrigation/rainfall. Apply **Prowl H2O** within 1 to 4 days of planting and up to but not more than 2.0 pts/A. Apply to a firm seedbed free of clods. Soil conditions that cause poor seed furrow closure and coverage may result in delayed emergence and stunting of the crop. **DO NOT** apply as a chemigation application. DO NOT apply Prowl H2O in tank mix with **Permit® herbicide** or **Valor® herbicide** as a preemergence application to dry beans because of

unacceptable crop response. Under certain environmental

conditions, including cool temperatures, excessive

moisture after application and wet soil conditions may result in crop injury, delayed emergence, and/or stunting with **Prowl H2O** use in dry beans. Adequate rainfall or irrigation after application before weed seedling germination provides the most effective weed control.

# **Crop-specific Restrictions**

- DO NOT feed lupin hay and forage or graze livestock in treated lupin fields.
- DO NOT apply Prowl H2O more than once per cropping season.
- **DO NOT** apply in any type of irrigation system.

### **Fallow**

**Prowl H20** may be applied to fallow ground following crop harvest as a planned residual treatment to control labeled broadleaf and grass weeds as they germinate.

**Prowl H20** may be applied to fallow ground by ground, air, or chemigation.

#### Use Method, Rate, and Timing

Apply as a broadcast spray at rates up to but not more than 3.0 pts/A of **Prowl H2O**. Emerged weeds will not be controlled by this treatment. **Prowl H2O** must be applied with a tank mix partner (i.e. glyphosate) for control of emerged weeds.

**DO NOT** make more than one application of **Prowl H2O** during a single fallow period.

**DO NOT** apply **Prowl H2O** to fallow ground after July 1 if treated fields are to be planted the following spring to crops not labeled for preplant or preplant incorporated applications of **Prowl H2O**.

There must be at least a 4-month interval between a **Prowl H2O** fallow application and the rotational planting of any fall-seeded cereal crop. Otherwise, specific rotational crop intervals must be adhered to between a fallow application of **Prowl H2O** and the planting of the following crop (see **Rotational Crop Restrictions** section of this label).

#### State-specific Instructions

In Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, Oregon, Utah, Washington, and Wyoming, apply as a broadcast spray at rates up to, but not more than, 3.2 pts/A of **Prowl H2O**.

#### **Farmstead**

Apply **Prowl H2O** as a broadcast spray at 2.1 qts/A for short-term (2 to 4 months) or at 4.2 qts/A for long-term (6 to 8 months) preemergence control of labeled broadleaf and grass weeds as they germinate on farmstead nonagricultural areas including barnyards, lanes, driveways, machinery or implement yards, windbreaks, and nonagricultural fencerows or ditchbanks.

# Forage Grasses (Cool-season)

**Prowl® H2O herbicide** may be applied by ground or chemigation, by air, or on dry bulk fertilizer.

# Use Method, Rate and Timing Established Perennial Cool-season Forage Grasses.

Apply **Prowl H20** to solid stands of perennial cool-season forage grasses [including bentgrass, bluegrass (Kentucky), bromegrass, fescue (fine, tall), orchardgrass, perennial ryegrass, timothy, wheatgrass, and others] grown for forage, green chop, silage, hay production, and/or grown in pastures, rangeland, or Federal Conservation Reserve Program (CRP) land for livestock grazing.

Apply **Prowl H2O** only to established (grass with 6 or more tillers per plant) perennial cool-season forage grasses.

Apply **Prowl H20** before target-weed germination in fall after the last cutting/mowing/grazing, in winter, in spring, or in-season between cuttings.

Uniformly apply at a broadcast rate of 1.1 to 4.2 quarts of **Prowl H2O** per acre in a single application or sequential applications made 30 or more days apart.

**DO NOT** apply more than a maximum cumulative total of 4.2 quarts of **Prowl H2O** per acre per year.

Apply the higher rate of **Prowl H2O** when higher weed pressure is anticipated or when a longer duration of residual weed control is desired.

**Prowl H20** may cause temporary injury to cool-season forage grass stands. Application made in periods of cold temperatures that temporarily limit normal crop growth or in extended cold temperature periods that initiate winter dormancy in grass crops may result in crop injury. Disease, extremely cold weather, drought, extensive frost heaving, salinity, low pH, or high pH may weaken stands and make the crop more susceptible to herbicide injury.

Mixed Stands of Established Cool-season Forage Grasses and Alfalfa. Apply Prowl H2O to mixed stands of established cool-season forage grasses and alfalfa (established alfalfa is defined as alfalfa planted in fall or spring which has gone through a first cutting/mowing). Apply Prowl H2O in fall after the last cutting/mowing/grazing, in winter, in spring before weed germination, or in-season between cuttings.

#### Chemigation Application

**Prowl H20** may be applied through sprinkler irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label.

#### **Tank Mixes**

**Prowl H20** may be applied in a sequential use program with other herbicides labeled for use in cool-season forage grasses or applied as a tank mix with other registered herbicides that control emerged weeds. Application of postemergence herbicides may cause crop injury. BASF recommends testing **Prowl H20** tank mixes on a small

portion of the target crop to determine if damage is likely to occur. Consult your local BASF dealer for local tank mix options. Always perform a mixing test to check the compatibility of **Prowl H2O** with all potential tank mix partners and fertilizers. Follow all precautions and restrictions on the labels of all products applied in combination with **Prowl H2O**. Always follow the most restrictive label.

Physical incompatibility, reduced weed control, or crop injury may result from mixing Prowl H2O with other pesticides, additives, or fertilizers.

#### **Crop-specific Restrictions**

- DO NOT apply Prowl H2O if surface water is present in the field.
- DO NOT apply more than a maximum cumulative total of 4.2 quarts of Prowl H2O per acre per year.
- There is no preharvest or pre-grazing interval for Prowl H2O-treated grass forage, green chop, silage, hay, pasture, or rangeland.
- Grazing and Preharvest Interval (PHI) for forage and hay of mixed stand alfalfa/cool-season forage grasses
   14 days
- **DO NOT** apply **Prowl H2O** to mixed stands of cool-season forage grasses with other forage legumes besides alfalfa.
- Not for use in California except as directed in supplemental labeling.

# Forage Grasses (Warm-season)

**Prowl H20** may be applied by ground or chemigation, by air, or on dry bulk fertilizer.

Use Method, Rate, and Timing
Established Bermudagrass and other Perennial
Warm-season Forage Grasses. Apply Prowl H2O in
fields of Bermudagrass (and other perennial warm-season
grasses including Bahiagrass, buffalograss, switchgrass,
and others) grown for forage or hay production, and/or
grown in pastures, rangeland, or Federal Conservation
Reserve Program (CRP) land for livestock grazing.

Apply **Prowl H2O** only to established (defined as planted in fall or spring which has gone through a first cutting/mowing) Bermudagrass and other perennial warm-season forage grasses.

Apply **Prowl H20** before target-weed germination in the dormant season [i.e., when grasses are not actively growing in fall (postharvest), during winter dormancy period, or in early spring before greenup] or in-season between cuttings. **DO NOT** apply to Bermudagrass and other perennial warm-season grasses after greenup in spring before the first cutting.

Uniformly apply at a broadcast rate of 1.1 to 4.2 quarts of **Prowl H2O** per acre in a single application.

**Prowl H20** may also be applied as a sequential or split program when the initial application(s) is made in the dormant season and the subsequent application(s) is made in-season between cuttings. **DO NOT** apply more

than a maximum cumulative total of 4.2 quarts of **Prowl® H2O herbicide** per acre per year.

Apply the higher rate of **Prowl H2O** when higher weed pressure is anticipated or when a longer duration of residual weed control is desired.

**Prowl H20** may be applied in a sequential use program or as a tank mix with other registered herbicides that control emerged weeds.

**Prowl H20** may cause temporary injury to Bermudagrass and other perennial warm-season grass stands. Disease, extremely cold weather, drought, extensive frost heaving, salinity, low pH, or high pH may weaken stands and make the crop more susceptible to herbicide injury.

# **Chemigation Application**

**Prowl H20** may be applied through sprinkler irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label.

#### **Tank Mixes**

**Prowl H20** may be tank mixed with other herbicides labeled for use in Bermudagrass and other perennial warm-season grass fields. BASF recommends testing **Prowl H20** tank mixes on a small portion of the target crop to determine if damage is likely to occur.

Application of postemergence herbicides may cause crop injury, including stunting or chlorosis of Bermudagrass and other perennial warm-season grasses. Consult your local BASF dealer for local tank mix options. Always perform a mixing test to check the compatibility of **Prowl H2O** with all potential tank mix partners and fertilizers. Follow all precautions and restrictions on the labels of all products applied in combination with **Prowl H2O**. Always follow the most restrictive label.

Physical incompatibility, reduced weed control, or crop injury may result from mixing Prowl H2O with other pesticides, additives, or fertilizers.

#### **Crop-specific Restrictions**

- DO NOT apply Prowl H2O if surface water is present in the field.
- DO NOT apply more than a maximum cumulative total of 4.2 quarts of Prowl H2O per acre per year.
- There is no preharvest interval for grass forage or hay, or for livestock grazing after application of **Prowl H2O**.
- Not for use in California except as directed in supplemental labeling.

# **Fruiting Vegetables**

**Prowl H20** may be applied to the following fruiting vegetables:

African eggplant Nonbell pepper

Bell pepper Okra

Bush tomato Pea eggplant Cocona Pepino Currant tomato Roselle

Eggplant Scarlet eggplant

Garden huckleberry
Goji berry
Tomatillo
Groundcherry
Martynia
Tree tomato

Naranjilla

Prowl H2O may be applied by ground or air.

# Use Method, Rate, and Timing

Uniformly apply **Prowl H2O** by ground or air as a broadcast preplant incorporated application or as a broadcast preplant surface application before transplanting fruiting vegetables.

Uniformly apply **Prowl H2O** only by ground as a postdirected application to transplanted or established direct-seeded fruiting vegetables.

**DO NOT** apply before direct-seeded fruiting vegetables.

**DO NOT** apply postemergence over the top of or to foliage of fruiting vegetables because severe injury may occur. **Prowl H2O** can be applied as a post-directed spray on the soil at the base of the plant, beneath plants, and between rows. Avoid direct contact with foliage or stems. Roots of transplants must be established. After the post-directed spray and when sufficient rainfall or irrigation does not occur to activate the herbicide, mechanically incorporate at the time of blocking and thinning or at layby. Apply **Prowl H2O** before weed germination. Emerged weeds will not be controlled by this treatment.

**Prowl H2O** may also be applied in fruiting vegetables transplanted to raised beds. Before transplanting, apply **Prowl H2O** preplant nonincorporated in a band to the top of the pressed bed just before laying plastic. After transplanting, **Prowl H2O** may also be applied in a band to the previously untreated row middles between the transplanted beds. For banded application to the bed or row middles, **DO NOT** overlap spray and apply more than the maximum broadcast use rate of **Prowl H2O** on a per acre basis for the given soil texture.

**Prowl H20** applied at 2.0 to 3.0 pts/A may aid in control or suppression of the following weeds when used as part of a comprehensive weed management program: black nightshade, hairy nightshade.

#### **Use Rate**

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.0 to 1.5
Medium	1.5 to 2.0
Fine	1.5 to 3.0

#### **Crop-specific Restrictions**

- **DO NOT** apply more than 3.0 pints **Prowl® H2O herbicide** per acre per season.
- Preharvest Interval (PHI) for tomatoes 21 days
- **Preharvest Interval** (PHI) for all other fruiting vegetables 70 days
- DO NOT plant lettuce within 6 months after a Prowl H2O application if the rows were covered with plastic.

#### **Crop-specific Precautions**

 Avoid root contact with **Prowl H2O**-treated soil when placing transplants into furrow or hole or injury may occur.

# **Grain Sorghum**

Prowl H2O may be applied by ground or air.

**Prowl H20** may be applied postemergence incorporated (CULTI-SPRAY) in grain sorghum grown in all states.

In addition, **Prowl H2O** may be applied early postemergence in grain sorghum grown in states east of the Mississippi River and in Arizona, Arkansas, California, eastern Texas, Louisiana, and the Missouri bootheel.

**Additional Weeds Controlled.** In addition to weeds listed in **Table 2**, **Prowl H2O** as a CULTI-SPRAY application controls the following weeds in grain sorghum: wild proso millet and shattercane.

#### Use Method, Rate, and Timing

**CULTI-SPRAY. Prowl H20** treatments can be applied from the 4-inch growth stage to as late as the last cultivation (layby) of grain sorghum. See specific directions for (CULTI-SPRAY) application under **Application Timing**.

**Early Postemergence.** For use only in states east of the Mississippi River and in Arizona, Arkansas, California, eastern Texas, Louisiana, and the Missouri bootheel.

The seedbed should be firm and free of clods and trash. Use only where adequate tillage is practiced to provide good seed coverage. Plant grain sorghum at least 1-1/2 inches deep to ensure good seed coverage.

#### **Use Rate**

#### **CULTI-SPRAY**

Soil Texture	Southern States <sup>1</sup> (pts/A)	Northern States <sup>1</sup> (pts/A)
Coarse	1.5	2.0
Medium	2.0	3.0
Fine	3.0	3.0
<sup>1</sup> See <b>Use Precautions</b> for map of specific states.		

### **Early Postemergence**

Soil Texture	Prowl H2O (pts/A)
Coarse	DO NOT USE
Medium, Fine	2.0

#### **Crop-specific Restrictions**

- DO NOT apply Prowl H2O in grain sorghum preplant incorporated or preemergence because serious crop injury can result.
- DO NOT apply Prowl H2O in grain sorghum more than once per crop season.
- DO NOT apply Prowl H2O as a CULTI-SPRAY treatment in grain sorghum planted in double-row beds.
- **DO NOT** replant grain sorghum if crop loss occurs.
- **DO NOT** apply in liquid fertilizer.
- Livestock can graze or be fed forage from treated grain sorghum 21 days or more after application.

#### **Green Onions**

**Prowl H20** may be applied to the following individual crops in the green onion crop subgroup:

Chive, fresh leaves
Chive, Chinese, fresh leaves
Chive, Chinese, fresh leaves
Chive, Chinese, fresh leaves
Chive, Chinese, fresh leaves
Chion, Green
Chion, Green
Chion, Green
Chion, Green
Chion, Green
Chion, Green
Chion, Macrostem
Chion, Tree, tops
Chion, Welsh, tops
Chion, Green

**Prowl H2O** may be applied preemergence, postemergence, or split application by ground, air, or chemigation.

# Use Method, Rate, and Timing

Uniformly apply 2.0 pints per acre of **Prowl H2O** as a broadcast spray to the soil surface as preemergence spray or as a postemergence spray to the crop at the 2 to 3 trueleaf stage at least 30 days before harvest. If **Prowl H2O** is to be applied sequentially as both a preemergence and postemergence spray, the preemergence spray must be applied 30 days before the postemergence spray. Onion seed must be fully covered by soil at planting. Injury may occur if onion seed is exposed to **Prowl H2O**.

#### **Chemigation Application**

**Prowl® H2O herbicide** may be applied through sprinkler irrigation systems. Apply at 2 to 3 true-leaf stage at least 30 days before harvest. **DO NOT** irrigate more than of 0.5 inch of water. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label.

### **Crop-specific Restrictions**

- DO NOT apply more than 2.0 pints per acre per application.
- **DO NOT** apply more than 4.0 pints per acre per season.
- Preharvest Interval (PHI) 30 days
- **DO NOT** feed forage or graze livestock in treated fields.
- Not for use in California.

#### **Crop-specific Precautions**

 Only apply Prowl H2O preemergence to green onions grown on muck soils or on mineral soils with more than 3% organic matter.

# Hops

Prowl H2O may be applied only by ground.

#### Use Method, Rate, and Timing

**Prowl H20** may be used as part of a weed management program in baby (first year planting) and established hops. Apply **Prowl H20** before target-weed germination when hops are in the dormant or vegetative growth stages.

Apply **Prowl H2O** as a broadcast or banded treatment (including postemergence-directed) using ground equipment. Apply the spray directly to the ground beneath the vines and/or in areas between rows. **DO NOT** apply over the top of vines with leaves or cones. Contact with hop foliage or cones by spray mixture or drift may cause injury.

Uniformly apply at a broadcast rate of 1.1 to 4.2 quarts of **Prowl H2O** per acre in a single application or sequential applications with an interval of 30 days or more.

**DO NOT** apply more than a maximum cumulative total of 4.2 quarts of **Prowl H2O** per acre per year.

**Prowl H20** may be applied in a sequential use program or as a tank mix with other registered herbicides that control emerged weeds.

#### **Tank Mixes**

**Prowl H20** may be tank mixed with other herbicides labeled for use in hops. BASF recommends testing **Prowl H20** tank mixes on a small portion of the target crop to determine if damage is likely to occur.

Follow all precautions and restrictions on the labels of all products applied in combination with **Prowl H2O**. Always follow the most restrictive label.

# **Crop-specific Restrictions**

- **DO NOT** apply to hops by air or through any type of irrigation system.
- DO NOT apply more than a maximum cumulative total of 4.2 quarts of Prowl H2O per acre per year.

- Preharvest Interval (PHI) for hop cones 90 days
- Not for use in California.

# **Leaf Lettuce**

Prowl H2O may be applied by ground or air.

#### Use Method, Rate, and Timing

With a single application, uniformly apply up to 2.1 pints per acre of **Prowl H2O** as a broadcast foliar spray to direct-seeded or transplanted leaf lettuce from the 3-leaf stage until 20 days before harvest.

# **Crop-specific Restrictions**

- DO NOT apply preplant, pretransplant, preemergence (direct-seeded) to leaf lettuce because severe injury may
- **DO NOT** foliar apply to leaf lettuce before the 3-leaf growth stage because severe injury may occur.
- **DO NOT** apply more than 2.1 pints per acre per season.
- Preharvest Interval (PHI) 20 days

# Leafy Brassica Greens

**Prowl H20** may be applied in the following leafy Brassica greens: mustard greens, broccoli raab, Chinese cabbage (bok choy), collards, kale, mizuna, mustard spinach, rape greens, and turnip greens (cultivars or varieties grown for leaves only).

Prowl H2O may be applied by ground or air.

#### Use Method, Rate, and Timing

With a single application, uniformly apply up to 2.1 pints per acre of **Prowl H2O** as a broadcast foliar spray to direct-seeded or transplanted leafy Brassica greens at the 4-leaf to 5-leaf stage.

### **Crop-specific Restrictions**

- DO NOT apply preplant, pretransplant, or preemergence (direct-seeded) to leafy Brassica greens because severe injury may occur.
- **DO NOT** foliar apply to leafy Brassica greens before the 4-leaf growth stage because severe injury may occur.
- **DO NOT** apply to turnip greens varieties grown for roots or to dual-purpose varieties grown for roots and tops.
- DO NOT use Prowl H2O-treated turnip greens roots for any feed or food purpose.
- **DO NOT** apply more than 2.1 pints per acre per season.
- Preharvest Interval (PHI) 21 days

# **Lentil and Peas**

**Prowl H20** may be applied to lentil and the following peas: dry, dwarf, edible-podded, English, garden, green, and pigeon.

**Prowl H20** may be applied by ground, air, or on dry bulk fertilizer (only fall and preplant incorporated applications).

# Use Method, Rate, and Timing

**Prowl® H20 herbicide** may be applied preplant surface or preplant incorporated in lentil and peas.

Preplant Surface and Preplant Incorporated (Fall Application in Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington, and Wyoming). Apply Prowl H2O and incorporate (rainfall, irrigation, or mechanically) in late fall before planting lentils or peas the following spring. Apply Prowl H2O in the late fall when soil temperatures are 45° F or below but before the ground freezes.

**DO NOT** apply when the air temperature is below 45° F.

Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected because factors like length of time between application and planting as well as uncontrollable weather factors determine herbicide activity and longevity.

**Preplant Incorporated. Prowl H2O** may be applied within 60 days of planting. After application, rotary hoeing and shallow cultivation/tillage can be practiced without reducing weed control. Avoid tillage that will bring untreated soil to the surface.

#### **Use Rate**

#### Preplant Surface<sup>1</sup>, Preplant Incorporated<sup>1</sup>

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.5
Medium	2.0
Fine	3.0
<sup>1</sup> Follow seasonal restrictions and/or state-specific instructions.	

#### State-specific Instructions

# Idaho, Montana, North Dakota, Oregon, and Washington

**Prowl H2O** may be applied to lentil or peas (dry peas only) grown in no-tillage and/or minimum-tillage systems in Idaho, Montana, North Dakota, Oregon, and Washington. Preplant surface application must be made within 30 days of planting. When planting, ensure the seed furrow is fully closed because conditions that allow the seed furrow to inadequately close and/or allow Prowl H2O to contact the seed may result in crop injury. Certain unfavorable environmental conditions, including cool temperatures, excessive moisture after application, and wet and/or compacted soil conditions, may result in delayed emergence and stunting with **Prowl H2O** use in lentil or peas. Adequate rainfall or irrigation after application before weed seedling germination provides the most effective weed control. Herbicide performance from surface application may be decreased compared to soil incorporated application.

### Idaho, Oregon, and Washington

**Prowl H20** may be applied postplant preemergence only to lentil or all peas grown in conventional-tillage systems in Idaho, Oregon, and Washington. Application must be made within 2 days of planting. Apply up to but not more than 1.5 pts/A. Apply to a firm seedbed free of clods. Soil conditions that cause poor seed furrow closure and coverage may result in delayed emergence and stunting of the crop. Certain environmental conditions including cool temperatures, excessive moisture after application, and wet soil conditions may result in delayed emergence and stunting with **Prowl H20** use in lentil or peas. Adequate rainfall or irrigation after application before weed seedling germination provides the most effective weed control.

# **Crop-specific Restrictions**

- DO NOT use in California.
- **DO NOT** apply **Prowl H2O** preemergence in peas unless otherwise noted in state-specific instructions.
- **DO NOT** apply **Prowl H2O** more than once per cropping season.
- DO NOT apply to lentil or peas, lentil or pea forage, pea silage, pea hay, or pea straw grown for livestock feed.
- **DO NOT** apply in any type of irrigation system.

# **Crop-specific Precautions**

 Any crop registered for a preplant incorporated application of **Prowl H2O** can be double cropped after peas.

# Melons

**Prowl H20** may be applied in the following melons: cantaloupe, citron melon, muskmelon, and watermelon.

Prowl H2O may be applied only by ground.

#### Use Method, Rate, and Timing

**Prowl H20** may be applied sequentially in melon production. Initially apply up to 2.1 pints per acre of **Prowl H20** as a shielded application between rows with 6 inches on either side of row middles (before melon transplanting or before a seeded crop has emerged) or between rows covered with plastic mulch (before holes are punched in plastic for melon planting). Make a second shielded application at up to 2.1 pints per acre of **Prowl H20** between rows with a minimum of 6 inches on either side of stem or vines or between plastic mulch before melon vine running. The interval between the sequential **Prowl H20** applications must be at least 21 days. Avoid spray contact with melon foliage or running vines because crop injury will occur.

#### **Crop-specific Restrictions**

- **DO NOT** apply more than 2.1 pints per acre in a single application or more than 4.2 pints per acre per season.
- Preharvest Interval (PHI) 35 days
- **DO NOT** feed forage or graze livestock in treated fields.
- Not for use in California.

# Mint (Peppermint and Spearmint)

Prowl® H2O herbicide may be applied by ground or air.

### Use Method, Rate, and Timing

Make a single broadcast preemergence application of **Prowl H2O** at 1.5 pints to 4.0 pints per acre, depending on soil texture (see chart following), to dormant established mint before weed germination. After **Prowl H2O** application, temporary crop injury may be observed early in the growing season as mint breaks dormancy and begins to grow.

**Prowl H20** will not cause crop injury when applied according to the label under normal growing conditions. Nonuniform application may result in injury to crops, poor stands, or soil residues; conversely, uneven application may reduce weed control. Diseases, cold weather, excessive moisture, deep planting, low or high pH, salinity, or drought may weaken seedlings and plants and make them more susceptible to herbicide damage.

#### **Use Rate**

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.5 to 2.0
Medium	2.0 to 4.0
Fine	2.0 to 4.0

#### **Crop-specific Restrictions**

- **DO NOT** apply **Prowl H2O** to mint in the first year of growth and establishment.
- DO NOT apply to mint that has broken dormancy or crop injury may result. Application to mint near dormancy break can result in crop injury. Risk of crop injury increases the closer application is to mint dormancy break.
- DO NOT apply to mint stands that have been weakened by age, disease, cold weather, excessive moisture, or other factors that reduce crop vigor. Mint growing under stress is more susceptible to herbicide damage.
- **DO NOT** apply more than 4.0 pints per acre per season.
- Preharvest Interval (PHI) 90 days
- DO NOT allow livestock to graze on treated spent hay or feed treated spent hay to livestock.
- DO NOT apply this product on mint through any type of irrigation system.

#### Monarda

**Prowl H20** may be applied by ground, air, chemigation, or on dry bulk fertilizer.

#### Use Method, Rate, and Timing

Before weed germination, make a broadcast application of **Prowl H2O** at 1.5 pints to 4.0 pints per acre, depending on soil texture (see chart following), to established monarda in dormancy, after emergence in the spring, or after the

first harvest. After **Prowl H2O** herbicide application, temporary crop injury may be observed during the growing season as monarda breaks dormancy and begins to grow, or re-grows after harvest.

**Prowl H20** will not cause crop injury when applied according to the label under normal growing conditions. Nonuniform application may result in injury to crops, poor stands, or soil residues; conversely, uneven application may reduce weed control. Diseases, cold weather, excessive moisture, deep planting, low or high pH, salinity, or drought may weaken seedlings and plants and make them more susceptible to herbicide damage.

#### **Use Rate**

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.5 to 2.0
Medium	2.0 to 4.0
Fine	2.0 to 4.0

#### **Chemigation Applications**

**Prowl H20** may be applied through sprinkler irrigation systems. Follow all directions, special instructions, and precautions about chemigation in the **Application Instructions** section of this label.

#### **Crop-specific Restrictions**

- DO NOT apply Prowl H2O to monarda in the first year of growth until transplants are well established.
- DO NOT apply to monarda stand that have been weakened by age, disease, cold weather, excessive moisture, or other factors that reduce crop vigor, as monarda growing under stress is more susceptible to herbicide damage.
- DO NOT apply more than 4.0 pts (1.9 lbs of pendimethalin) of Prowl H2O per acre per year.
- Preharvest Interval (PHI) 90 days
- DO NOT allow livestock to graze on treated spent hay or feed treated spent hay to livestock.

# **Crop-specific Precautions**

- Avoid overlapping spray patterns because crop injury can occur.
- Avoid heavy residue on soil surface from previous year's crops.

#### **Peanut**

**Prowl H2O** may be applied by ground, air, chemigation, or on dry bulk fertilizer (only fall and preplant incorporated applications).

DO NOT use in California.

**Use Method, Rate, and Timing Preplant Incorporated.** Apply **Prowl H2O** up to 60 days before planting and incorporate.

**Preemergence.** Apply **Prowl H2O** at planting or up to 2 days after planting and before crop emergence. For

peanuts grown under overhead irrigation or to prevent decreased crop pegging, adequate incorporation must be achieved by applying a minimum of 0.75 inch of overhead irrigation or rainfall within 48 hours after **Prowl® H2O herbicide** application.

### **Chemigation Application**

**Prowl H20** may be applied through sprinkler irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label.

#### **Use Rate**

Region	Rate (pts/A)
New Mexico, Oklahoma, and Texas	1.0 to 2.0
Other peanut growing states*	2.0

<sup>\*</sup>For heavy weed infestations, especially of Texas panicum, up to 3.2 pts/A of **Prowl H2O** can be used in Alabama, Florida, or Georgia.

# Perennial Grasses Grown for Seed Production

**Prowl H20** may be applied to established (defined as planted in the fall or spring which has gone through a first cutting/mowing) warm-season perennial grasses (including Bermudagrass, switchgrass, and others) and to established (6 or more tillers per plant) cool-season perennial grasses (including Kentucky bluegrass, tall fescue, orchardgrass, perennial ryegrass, fine fescue, and others).

**Prowl H20** may be applied by ground, chemigation, air, or on dry bulk fertilizer.

# Use Method, Rate, and Timing

In warm-season perennial grasses, apply **Prowl H20** to postharvest grass during the fall or during winter dormancy or after the first seed harvest/cutting. **DO NOT** apply to warm-season perennial grasses after greenup in the spring before the first seed harvest/cutting. In cool-season perennial grasses, apply **Prowl H20** to postharvest grass during regrowth at the beginning of significant fall rains or in spring.

Apply **Prowl H20** before target-weed germination. Uniformly apply at a broadcast rate of 2.1 to 4.2 quarts of **Prowl H20** per acre in a single application. **Prowl H20** may also be applied in two split applications, with 1/2 the seasonal application rate applied in fall or winter followed by the remaining 1/2 of the seasonal application rate applied in spring. **DO NOT** apply more than a maximum cumulative total of 4.2 quarts of **Prowl H20** per acre in any one crop season.

In warm-season and cool-season perennial grasses, use the high application rate of **Prowl H2O** where more dense infestations of targeted annual grasses, annual broadleaf weeds, or volunteer grass seedlings are anticipated, or when a longer duration of residual weed control is desired. Excess grass straw and crop residue from the previous

harvest should be evenly spread or removed by such methods as crew cutting, propane flaming, or open field burning (when local regulations allow) before **Prowl H2O** application, or reduced weed control may result.

**Prowl H20** may be applied in a sequential use program or as a tank mix with other registered herbicides that control emerged weeds.

**Prowl H20** may cause temporary injury to perennial grass stands. Application made in periods of cold temperatures that temporarily limit normal crop growth or in extended cold temperature periods that initiate winter dormancy in grass crops may result in crop injury. Diseases, extremely cold weather, drought, extensive frost heaving, low or high pH, or salinity may weaken stands and make them more susceptible to herbicide damage.

# **Chemigation Application**

**Prowl H20** may be applied through sprinkler irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in **Application Instructions** section of this label.

#### **Additional Weeds Controlled**

**Prowl H2O** applied before weed germination controls annual bluegrass, volunteer fescue, and volunteer ryegrass in addition to weeds listed in **Table 2**.

#### **Tank Mixes**

**Prowl H20** may be tank mixed with **Outlook® herbicide** or with other herbicides labeled for use in perennial grasses grown for seed. BASF recommends testing **Prowl H20** tank mixes on a small portion of the target crop to determine if damage is likely to occur.

Physical incompatibility, reduced weed control, or crop injury may result from mixing Prowl H2O with other pesticides, additives, or fertilizers.

Application of postemergence herbicides may cause crop injury. Consult your local BASF dealer regarding local tank mix options. Always perform a mixing test to check the compatibility of **Prowl H2O** with all potential tank mix partners. Follow all precautions and restrictions on the labels of all products applied in combination with **Prowl H2O**. Always follow the most restrictive label.

#### **Crop-specific Restrictions**

- **DO NOT** apply if surface water is present in the field.
- DO NOT apply more than a maximum cumulative total of 4.2 quarts of Prowl H2O per acre in any one crop season.
- There is no preharvest interval for grass forage or hay, or for livestock grazing after application of **Prowl H2O**
- Preharvest Interval (PHI) for seed of warm-season and cool-season perennial grasses - 90 days
- Not for use in California except as directed in supplemental labeling.

# **Crop-specific Precautions**

- Some stunting and chlorosis of perennial grasses may occur with postemergence application.
- Application made after perennial grasses exceed
   6 inches in height may result in poor weed control

# because of possible reduced spray coverage to the soil.

 Grass straw remaining after seed harvest of warm-season and cool-season perennial grasses may be used as livestock bedding, and/or grazed by or fed to livestock. The grower must notify the seed processor that there is no pesticide tolerance on grass seed screenings; therefore, it cannot be used in livestock feed.

#### **Potato**

**Prowl® H2O herbicide** may be applied by ground, air, chemigation, or on dry bulk fertilizer (preemergence incorporated only).

**Additional Weeds Controlled.** In addition to the weeds listed in **Table 2**, **Prowl H2O** controls stinging nettle in potatoes.

# Use Method, Rate, and Timing

**Preemergence.** Apply **Prowl H2O** after planting, but before potatoes and weeds emerge, or after dragoff.

**Preemergence Incorporated.** Apply **Prowl H2O** and incorporate after planting but before potatoes and weeds emerge. Where dragoff is practiced, apply **Prowl H2O** and incorporate before, at, or after dragoff, but before potatoes and weeds emerge. Take care incorporation equipment does not damage seed pieces or elongating sprouts.

**Early Postemergence.** Apply **Prowl H2O** from crop emergence to the 6-inch growth stage. **DO NOT** apply **Prowl H2O** postemergence if potatoes are under stress from cold/wet or hot/dry conditions or crop injury may occur.

#### Chemigation Application

**Prowl H20** may be applied through sprinkler irrigation systems. Apply **Prowl H20** preemergence after planting, after dragoff, or early postemergence through sprinkler irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label.

#### Use Rate

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	1.5	1.5
Medium	2.0	3.0
Fine	3.0	3.0

#### **Crop-specific Restrictions**

- **DO NOT** apply to sweet potatoes or yams.
- **DO NOT** apply preplant.
- **DO NOT** make more than one application of **Prowl H2O** per season.

# **Crop-specific Precautions**

 Application of **Prowl H2O** on White Rose variety potatoes during or followed by cool and/or wet weather conditions may result in crop injury.

#### Rice

**Prowl H2O** may be applied by ground, air, or on dry bulk fertilizer (delayed preemergence and early postemergence applications only) to rice grown under conventional-tillage, reduced-tillage, minimum-tillage, or no-till systems, or on stale seedbeds.

**Additional Weeds Controlled.** In addition to weeds listed in **Table 2**, **Prowl H2O** controls the following weeds in rice: junglerice and sprangletop.

# Use Method, Rate, and Timing

**Delayed Preemergence.** Apply **Prowl H2O** alone or with tank mix partner for delayed preemergence weed control in grain-drilled, dry-seeded rice. Apply **Prowl H2O** alone or in tank mix to levees after the levees are pulled and planted. The seedbed should be firm and free of clods and must be prepared to allow for good seed coverage. Use of a planter under conditions that do not allow good soil coverage of the rice seed can result in reduced stand or stunting if **Prowl H2O** contacts germinating rice seed. Exposed seeds that come in contact with **Prowl H2O** may be injured. Apply only when growing conditions favor vigorous rice growth. The seedbed should have adequate moisture for seed germination. **Not for use in grain-drilled, dry-seeded rice in California.** 

Uniformly apply the specified rate of **Prowl H2O** after rice planting and before rice emergence (spiking) and weed germination. Apply after rice seed has absorbed water and germinated and after the soil has been previously sealed over the seed by at least 1 inch of rainfall or by irrigation (flush). If the soil has not been sealed by rain or flush, apply when 80 percent of germinated seeds have a primary root (radicle) or shoot at least 1/2-inch long. If there is insufficient moisture, BASF recommends flushing before **Prowl H2O** application to supply moisture for root (radicle) initiation and for vigorous rice and weed growth.

If applied to soil before these conditions, or to cracked soil, stand reduction or stunting of rice may occur. Under some conditions, use of gibberellic acid-treated seed, heavy rainfall after application, or flushing after application may result in herbicide injury to rice. Rice can overcome moderate injury with appropriate cultural practices.

Because of the residual activity of **Prowl H2O**, this treatment may be applied if rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal rice growth and activity of **Prowl H2O**.

**Early Postemergence.** Apply **Prowl H2O** as a tank mix partner in dry-seeded rice. Base applications on weed and crop size guidelines of the tank mix partner. **DO NOT** apply to fields with standing water. If necessary, fields may be flushed before treatment to produce vigorous rice and

weed growth. Because soil and weeds must be completely exposed to spray coverage, no flood water should be on the field at the time of application. Cloddy soil, standing water (puddles) at the time of application, or cracks in the soil that form after application may result in reduced weed control. Because of residual activity of **Prowl® H2O herbicide**, this treatment may be applied if rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal rice growth and activity of **Prowl H2O**.

Postemergence (California water-seeded rice only). As a component of a comprehensive weed management program, apply **Prowl H2O** alone or tank mixed with a postemergence herbicide after water-seeded rice has reached the 4-leaf to 6-leaf stage (spike plus 3 to 5 true leaves). Applications made before the 4-leaf rice stage may result in crop injury.

Water-seeded rice must also be well-rooted/pegged (i.e. standing erect after the flood is removed) before application. **DO NOT** apply to rice that is leaning over and/or laying flat to the ground after flood removal since this is characteristic of a poorly established root system. Rice roots must be below the **Prowl H2O**-treated soil zone. Injury, stunting, and/or stand reduction can occur if **Prowl H2O** contacts the rice roots.

Fields must be completely drained and free of standing water (moist/saturated soil) before application. If soil is saturated at the time of application, allow the soil surface to dry before restoring the permanent flood. **Prowl H2O** requires alternate wetting/drying cycles to be activated. Weed control will be reduced if the soil surface is not allowed to dry out before restoration of the permanent flood. Resume normal water management practices after permanent flood restoration.

**Prowl H20** does not control weeds postemergence; therefore, **Prowl H20** must be tank mixed with a postemergence herbicide to control emerged weeds at the time of application.

**Prowl H2O** aids in control or suppression of the following weeds when used as part of a comprehensive weed management program:

Barnyardgrass, early and late watergrass (including biotypes resistant to other herbicide modes of action, e.g. rice mimic), sprangletop, smallflower umbrella sedge\*, redstem\*

\* Suppression only

In California water-seeded rice, **Prowl H2O** may be applied with aerial or ground application equipment. For aerial application, apply the specified rate of **Prowl H2O** in 5 gallons to 10 gallons of water per acre. If applied as a tank mix with another herbicide, make sure proper gallonage per acre per label directions (i.e. 10 to 15 with propanil) is used to ensure thorough coverage. To minimize drift, **DO NOT** apply during periods of wind more than 10 mph, or when wind conditions favor drifting, or if there is a temperature inversion. BASF recommends that a flagman or an automatic mechanical flagging unit on the

aircraft be used to avoid overlapping and possible crop injury.

For ground equipment, apply the specified rate of **Prowl H2O** in 10 gallons to 20 gallons of water per acre. If **Prowl H2O** is applied as a tank mix with another herbicide, make sure proper gallonage per acre per label directions (i.e. 20 to 30 for propanil) is used to ensure thorough coverage. Use a calibrated low-pressure (20 PSI to 40 PSI) sprayer equipped with appropriate nozzles for uniform spray distribution and minimize drift. Keep the bypass line on or near the bottom of the tank to minimize foaming. Nozzle screens must be no finer than 50 mesh. **DO NOT** apply **Prowl H2O** during periods of gusty winds or when wind velocity is more than 20 mph.

**Postemergence Tank Mixes:** To control emerged weeds at application, **Prowl H2O** may be tank mixed with one of the following postemergence herbicides:

Clincher® herbicide
Grandstand® herbicide
Granite® SC herbicide
Regiment® herbicide
Strada® WG herbicide
Whip® 360 herbicide
propanil (e.g. Super WHAM!® herbicide)

When using tank mixes with **Prowl H2O**, always read the companion product label(s) and follow all precautions and restrictions. Always follow the most restrictive label.

Observe all restrictions regarding propanil-restricted zones.

# **Crop-specific Restrictions (for water-seeded rice)**

- **DO NOT** apply **Prowl H2O** before the 4-leaf rice stage (spike plus 3 true leaves) or to rice that is not well-rooted/pegged. The rice must be standing erect after the flood is removed and before application.
- **DO NOT** apply to fields with standing water.
- **DO NOT** apply **Prowl H2O** through any type of irrigation system.
- **DO NOT** apply in liquid fertilizer.
- **DO NOT** spray target crop within 60 feet of sensitive crops (crops not listed on the **Prowl H20** label).
- DO NOT spray target crop within 60 feet of crops labeled for Prowl H2O application where the method of application, rate, or timing of spray application is prohibited.
- DO NOT apply more than the maximum rate for any soil type in one season.
- DO NOT use water containing Prowl H2O residues from rice cultivation to irrigate food or feed crops not registered for use with Prowl H2O.

In case of a crop failure because of weather conditions or disease after treatment with **Prowl H2O** alone or in tank mix, only drilled dry-seeded rice may be immediately replanted; however, the grower assumes all risks and consequences associated with replanting of rice because there is the potential for stand reduction or stunting. BASF recommends a 10% increase in seeding rate. Replant seed below the herbicide layer because reduced stand or

stunting may occur if **Prowl® H2O herbicide** contacts germinating rice seed. **DO NOT** replant gibberellic acid-treated seed. **DO NOT** reapply **Prowl H2O** alone or in tank mix.

**DO NOT** apply to stressed rice. Stress factors include cold or hot temperature extremes, excessive moisture or drought, problem soils, poor field drainage, or deep water after application.

#### **Use Rate**

# **Delayed Preemergence**

Soil Texture	Rate (pts/A)
Sands, loamy sands	DO NOT USE
Sandy loams	1.5
Loams, silt loams, silts, sandy clay loams	2.0
Silty clay loams, clay loams, sandy clays, silty clays, clays	2.0

#### **Early Postemergence**

Soil Texture	Rate (pts/A)
Coarse	1.5
Medium	2.0
Fine	2.0

# Postemergence in California Water-seeded Rice

Soil Texture	Rate (pts/A)
Coarse	1.5
Medium	2.0
Fine	2.0

# **Crop-specific Restrictions**

- DO NOT apply Prowl H2O through any type of irrigation system.
- **DO NOT** apply in liquid fertilizer.
- DO NOT use on water-seeded rice except as specified in other BASF labeling.
- DO NOT apply to rice fields if fields are used for fish production, especially catfish farming.
- Prowl H2O may be applied to rice fields used for crayfish production.
- DO NOT use water containing Prowl H2O residue from rice cultivation to irrigate food or feed crops not registered for use with Prowl H2O.
- In case of crop failure because of weather conditions or disease after treatment with **Prowl H2O** alone or in tank mix, only drilled dry-seeded rice may be immediately replanted; however, the grower assumes all risks and consequences associated with replanting of rice because there is the potential for stand reduction or stunting. BASF recommends a 10% increase in seeding rate. Replant seed below the herbicide layer because

reduced stand or stunting may occur if **Prowl H2O** contacts germinating rice seed. **DO NOT** replant with gibberellic acid-treated seed. **DO NOT** reapply **Prowl H2O** alone or in tank mix.

- DO NOT apply Prowl H2O and then flush for germination.
- DO NOT apply to stressed rice. Stress factors include cold or hot temperature extremes, excessive moisture or drought, problem soils, poor field drainage, or deep water after application.
- DO NOT apply early preemergence or preplant incorporated because severe rice injury is possible.

# Rosemary

**Prowl H20** may be applied by ground, air, chemigation, or on dry bulk fertilizer.

#### Use Method, Rate, and Timing

Before weed germination, make a broadcast application of **Prowl H2O** at 1.5 pints to 4.0 pints per acre, depending on soil texture (see chart following), to established rosemary prior to onset of rapid growth in early spring or after the first harvest. After **Prowl H2O** herbicide application, temporary crop injury may be observed during the growing season as rosemary grows or re-grows after harvest.

**Prowl H20** will not cause crop injury when applied according to the label under normal growing conditions. Nonuniform application may result in injury to crops, poor stands, or soil residues; conversely, uneven application may reduce weed control. Diseases, cold weather, excessive moisture, deep planting, low or high pH, salinity, or drought may weaken seedlings and plants and make them more susceptible to herbicide damage.

#### **Use Rate**

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.5 to 2.0
Medium	2.0 to 4.0
Fine	2.0 to 4.0

#### Chemigation Applications

**Prowl H20** may be applied through sprinkler irrigation systems. Follow all directions, special instructions, and precautions about chemigation in the **Application Instructions** section of this label.

# **Crop-specific Restrictions**

- DO NOT apply Prowl H2O to rosemary in the first year of growth and establishment.
- DO NOT apply to rosemary stand that have been weakened by age, disease, cold weather, excessive moisture, or other factors that reduce crop vigor, as rosemary growing under stress is more susceptible to herbicide damage.
- **DO NOT** apply more than 4.0 pts (1.9 lbs pendimethalin) of **Prowl H20** per acre per year.

- Preharvest Interval (PHI) 60 days
- DO NOT allow livestock to graze on treated spent hay or feed treated spent hay to livestock.

# **Crop-specific Precautions**

- Avoid overlapping spray patterns because crop injury can occur.
- Avoid heavy residue on soil surface from previous year's crops.

#### **Safflower**

**Prowl® H2O herbicide** may be applied to safflower by ground, air, or on dry bulk fertilizer (only fall and preplant incorporated applications).

Plant safflower 1-1/2 inches to 2-inches deep and completely cover with soil. In California, plant safflower deep enough to completely cover with soil.

#### Use Method, Rate, and Timing

**Preplant Incorporated.** In all states, apply within 60 days of planting and incorporate.

# **Preplant Incorporated**

Fall Application in Minnesota, Montana, North Dakota, and South Dakota. Apply Prowl H2O and immediately incorporate in late fall before planting safflower the following spring. Apply Prowl H2O in the late fall when soil temperatures are 45° F or below but before the ground freezes. DO NOT apply when air temperature is below 45° F. Before safflower planting in the spring, fields treated with Prowl H2O should receive at least one shallow additional incorporation. Spring incorporation should be at an angle to the last tillage operation.

**Fall Application in California.** Apply **Prowl H2O** and immediately incorporate during tillage operations in the fall to target winter annual weeds before planting safflower the following spring. Before safflower planting in the spring, fields treated with **Prowl H2O** should receive at least one additional incorporation.

**Preemergence.** Apply **Prowl H2O** at planting or up to 2 days after planting.

Preemergence application of **Prowl H20** to safflower may increase the likelihood of crop injury, especially when crops are grown in stress situations, including compacted soils. Decreased herbicide performance compared to preplant incorporated application may also result from a preemergence application. If dry conditions with limited precipitation exist or unseasonably cool temperatures after planting are forecast, apply **Prowl H20** before planting and mechanically incorporate with tillage. **Prowl H20** may be applied preemergence in conventional-tillage safflower.

Preemergence application of **Prowl H2O** to safflower grown in California must be followed with irrigation or rainfall to establish a crop stand.

**No-till Safflower. Prowl H20** may be applied at 3.0 pts/A up to 30 days before planting (preplant) to

immediately after planting (preemergence). **DO NOT** use in California.

#### **Use Rate**

#### **Preplant Incorporated, Preemergence**

	Southern	Northeri	n States <sup>1</sup>
Soil Texture	States <sup>1</sup> (pts/A)	< 3% Organic (pts	<b>Matter &gt; 3%</b> (S/A)
Coarse	1.5	2.0	2.0
Medium	2.0	2.5	3.0
Fine	3.0	3.0	3.0
<sup>1</sup> See <b>Use Precautions</b> for map of specific states.			

#### Preplant Incorporated (Fall)<sup>1</sup>

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	2.5	2.5
Medium	3.0	3.5
Fine	3.5	3.5

<sup>&</sup>lt;sup>1</sup> For use in California, Minnesota, Montana, North Dakota, and South Dakota only.

### **Crop-specific Restrictions (All Tillage Types)**

- DO NOT apply Prowl H2O postemergence.
- **DO NOT** apply more than the highest rate per acre for any soil type.
- DO NOT feed forage or graze livestock in treated safflower fields.

# Soybean

**Prowl H20** may be applied by ground, air, or on dry bulk fertilizer (only fall and preplant incorporated applications).

**Prowl H20** may be applied to soybean grown under conventional-tillage, minimum-tillage, or no-till systems.

**Additional Weeds Controlled.** In addition to weeds listed in **Table 2**, **Prowl H2O** controls or suppresses the following weeds in soybean: red rice and itchgrass. For specific rates for itchgrass and red rice management, see table at end of this section.

#### Use Method, Rate, and Timing

**Fall Applied. Prowl H20** may be surface applied or incorporated in the fall, after fall harvest and before ground freeze in states north of I-80 and the entire states of Illinois, Indiana, Iowa, Kansas, Kentucky, Missouri, Nebraska, Ohio, Oklahoma, and Texas. Fall application of **Prowl H20** will not provide season-long weed control.

**Preplant Surface.** Apply **Prowl H2O** within 15 days of planting. **Prowl H2O** may be applied within 45 days of planting when used in tank mix or applied sequentially with **Extreme® herbicide**, **Pursuit® herbicide**, or **Raptor® herbicide**.

**Preplant Incorporated.** Apply **Prowl® H2O herbicide** within 60 days of planting and incorporate.

**Preemergence.** Apply **Prowl H2O** at planting or within 2 days after planting. Apply to a firm seedbed free of clods. **DO NOT** apply **Prowl H2O** preemergence north of Interstate 80, except in the states of Indiana, Michigan, and Ohio.

#### **Use Rate**

# Fall Surface, Fall Incorporated, Preplant Surface, Preplant Incorporated

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	1.5	2.0
Medium	2.5*	3.0
Fine**	3.0	3.0

<sup>\*</sup> DO NOT apply more than 2.1 pts for Southern states; see Use Precautions for map of specific states.

# **Preemergence**

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	1.5	1.5
Medium	2.0	2.0
Fine	2.0	2.5

# Preplant Incorporated Red Rice Control and Itchgrass Suppression

Soil Texture	Up to 3% Organic Matter <sup>1</sup> (pts/A)
Coarse	3.0
Medium	3.0
Fine	4.0
<sup>1</sup> <b>DO NOT</b> use on soils with more than 3% organic matter.	

#### **Crop-specific Restrictions**

- DO NOT use Prowl H2O in soybean in California.
- Livestock can graze or be fed forage from treated soybean fields.
- Preharvest Interval (PHI) 85 days
- DO NOT apply more than one application per crop season at the highest rate per acre for any given soil type and application method.

# Strawberry (and other Low-growing Berries)

**Prowl H20** may be applied in the following low-growing berries:

Bearberry
Bilberry
Blueberry, lowbush
Cloudberry
Cranberry

Lingonberry
Muntries
Partridgeberry
Strawberry
Cranberry

**Prowl H2O** may be applied by ground, air, or chemigation.

#### Use Method, Rate, and Timing

Stunting, reduced growth, or reduction in daughter plants may occur with use of Prowl H2O in strawberries and other low-growing berries.

Uniformly apply 1.5 to 3.0 pints per acre of **Prowl H2O** as a broadcast spray to the soil surface at pretransplant time or post-transplant time (must be within 7 days of transplanting of rootstock in the Pacific Northwest). However, in areas where irrigation is used daily (frequently) after transplanting, apply **Prowl H2O** just before the end of the watering regime to maximize weed control benefits of **Prowl H2O**. Extended periods of irrigation may reduce residual control provided by **Prowl H2O**.

However, **Prowl H2O** applications to row middles between the beds are allowed. **DO NOT** apply post-transplant if new foliage from rootstock is exposed to spray area. A second application of 1.5 to 3.0 pints per acre of **Prowl H2O** may be applied in a band to the soil between crop rows (or between the plastic beds) 35 days before harvest, but **DO NOT CONCENTRATE THE RATE** per acre into the treated area, and **DO NOT** allow spray to contact strawberry or other low-growing berry plants. The second application rate is based on per unit of treated area.

**Prowl H20** may also be applied to strawberries or other low-growing berries in fall or winter dormancy. Uniformly apply 1.5 to 3.0 pints per acre of **Prowl H20** as a broadcast spray to the soil surface before onset of new seasonal growth from strawberry or other low-growing berry crowns. **DO NOT** apply if new seasonal growth (leaves) has emerged or is exposed.

**Prowl H20** may also be applied to perennial strawberries or other low-growing berries after renovation. Uniformly apply 1.5 to 3.0 pints per acre of **Prowl H20** as a broadcast spray to the soil surface after renovation (mowing or other defoliation operation) when no foliage is exposed but before onset of new seasonal growth from strawberry or other low-growing berry crowns. **DO NOT** apply if new seasonal growth (leaves) has emerged or leaves are exposed.

<sup>\*\*</sup> For heavy clay soils, apply **Prowl H2O** at the broadcast rate of 3.2 pints per acre.

# **Chemigation Application**

**Prowl® H2O herbicide** may be applied through sprinkler irrigation systems. Follow all directions, special instructions, and restrictions about chemigation in the **Application Instructions** section of this label. **DO NOT** allow **Prowl H2O**-treated irrigation water to contact strawberry or other low-growing berry plants.

#### **Use Rate**

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.5
Medium	2.0 to 2.5
Fine	2.5 to 3.0

#### **Crop-specific Restrictions**

- DO NOT apply more than 3.0 pints per acre per application.
- **DO NOT** apply more than 6.0 pints per acre per season.
- Preharvest Interval (PHI) 35 days
- **DO NOT** feed forage or graze livestock in treated fields.
- DO NOT plant lettuce within 6 months after a
   Prowl H2O application if strawberry beds were covered with plastic.

# Additional Use in Oregon and Washington in First Year Nonbearing Strawberries

Uniformly broadcast apply **Prowl H2O** preemergence before transplanting strawberries. **DO NOT** harvest for food or feed any portion of the strawberry plant within 1 year (365 days) of **Prowl H2O** application. **DO NOT** apply **Prowl H2O** through any type of irrigation system or by air.

# **Broadcast Use Rate**First Year Nonbearing Strawberries

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	1.5 to 2.0	2.0 to 3.0
Medium	2.0 to 2.5	2.0 to 3.0
Fine	2.0 to 3.0	2.5 to 3.5

#### Sugarcane

Prowl H2O may be applied by ground or air.

### Use Method, Rate, and Timing

**Prowl H20** may be applied preemergence through layby to plant or ratoon sugarcane. Although there may be adequate crop tolerance for postemergence application at layby, the spray must be directed under the sugarcane canopy to obtain effective weed control.

#### **Use Rate**

Use Area	Broadcast Rate <sup>1</sup> (pts/A)
All states, except Hawaii	4.2 to 6.2
Muck soils (Florida only)	4.2 to 8.4
Hawaii	4.2 to 8.4

<sup>&</sup>lt;sup>1</sup> Use the high rate if: heavy clay soils; no mechanical incorporation is planned; heavy weed populations are anticipated; itchgrass infestation is anticipated; no shaving is planned.

Additional Use as Fallow Ground Application Only in Louisiana. Apply Prowl H2O before weed germination for control of annual grasses including itchgrass (Raoulgrass), seedling Johnsongrass, and *Panicum* spp. in preplant fallow ground sugarcane. If necessary, control emerged weeds before application of **Prowl H2O** with postemergence herbicides and/or mechanical cultivation.

After cultivation and forming the beds in the spring, apply **Prowl H2O** at 2.6 qts/A using ground equipment. Sugarcane beds should be free of trash or clods at the time of application. If sufficient rainfall (1/2 to 3/4 inch) has not occurred within 7 days of application, perform a shallow incorporation (1 to 2 inches) with an additional pass of a Lilliston-type Lely **Roterra<sup>TM</sup>** cultivator set to cut 2-inches or 3-inches deep. A minimum interval of 60 days between **Prowl H2O** application and planting of sugarcane is required or crop injury may occur. After planting, apply **Prowl H2O** to sugarcane preemergence through layby, but **DO NOT** apply more than 12.5 pts/A of **Prowl H2O** during one growing season.

Noncropped Water Drainage Areas Application Only in Louisiana. Apply Prowl H2O before weed germination to nonirrigated, noncropped water drainage areas (ditchbanks) adjacent to sugarcane fields. If necessary, control emerged weeds before application of Prowl H2O with postemergence herbicides and/or mechanical cultivation.

Apply **Prowl H2O** at 2.6 to 3.5 qts/A using ground equipment. **DO NOT** apply **Prowl H2O** below the high water mark or when water is present in the drainage area (ditchbank). **DO NOT** apply more than 12.5 pts/A of **Prowl H2O** during one growing season.

**Areas in Hawaii Subject to High Winds.** For wind speeds between 10 to 20 mph, **DO NOT** apply in a manner that allows spray to drift from the application target site. Use drift-mitigating measures, including lowering the spray boom; use coarse spray according to ASAE 572 definition for standard nozzles; use hooded or shielded sprayers; use spray drift retardants; or use any other measures known to control drift.

#### **Crop-specific Restrictions**

- DO NOT apply more than 12.5 pints of Prowl H2O per acre in one growing season.
- DO NOT use less than 11 gallons of water as a carrier when applying Prowl H2O for weed control.

- **DO NOT** make aerial application at close-in because complete and uniform coverage cannot be obtained.
- **DO NOT** apply through any type of irrigation system.
- Preharvest Interval (PHI) 90 days
- DO NOT graze treated fields or feed treated forage or fodder to livestock.

# **Crop-specific Precautions**

 Ratoon sugarcane must be lightly shaved in early spring to remove the old stubble before incorporation over the line of sugarcane is possible. Carefully adjust equipment to incorporate without causing excessive damage to emerging shoots.

# Sunflower (and other Group 20B Oilseeds)

**Prowl® H2O herbicide** may be applied to sunflower and other Group 20B oilseed crops as follows:

Calendula Rose hip
Castor oil plant Stokes aster
Chinese tallowtree Sunflower
Euphorbia Tallowwood
Evening primrose Tea oil plant
Jojoba Vernonia

Niger seed

**Prowl H20** may be applied by ground, air, or on dry bulk fertilizer (only fall and preplant incorporated applications).

Plant sunflower and other Group 20B oilseeds 1-1/2-inches to 2-inches deep and completely cover with soil.

Use Method, Rate, and Timing Preplant Incorporated (Spring). In all states, apply within 60 days of planting and incorporate.

Preplant Incorporated (Fall Applications Only in Minnesota, North Dakota, and South Dakota). Apply Prowl H2O and immediately incorporate in late fall before planting sunflower or oilseeds the following spring. Apply Prowl H2O in late fall when soil temperatures are 45° F or below but before the ground freezes. DO NOT apply when air temperature is below 45° F. Before sunflower or other Group 20B oilseeds planting in the spring, fields treated with Prowl H2O should receive at least one shallow additional incorporation. Spring incorporation should be at an angle to the last tillage operation.

Preemergence. Apply Prowl H2O at planting or up to 2 days after planting. Preemergence application of Prowl H2O to sunflower or other Group 20B oilseeds may increase the likelihood of crop injury, especially when crops are grown in stress situations, including compacted soils. Decreased herbicide performance compared to preplant incorporated application may also result from a preemergence application. If dry conditions with limited precipitation exist or unseasonably cool temperatures after planting are forecast, apply Prowl H2O before planting and mechanically incorporate with tillage. Prowl H2O may be applied preemergence in conventional tillage sunflower

or other Group 20B oilseeds, **except in the state of California**.

**No-till Sunflower or other Group 20B Oilseeds. Prowl H2O** may be applied at 3.0 pts/A up to 30 days before planting (preplant) to immediately after planting (preemergence). **DO NOT** use in California.

#### **Use Rate**

# Preplant Incorporated (Spring), Preemergence (Conventional Tillage)

	Southern	Northeri	n States¹
Soil Texture	States <sup>1</sup> (pts/A)	< 3% Organic Matter > 3% (pts/A)	
Coarse	1.5	2.0	2.0
Medium	2.0	2.5	3.0
Fine	3.0	3.0	3.0
<sup>1</sup> See <b>Use Precautions</b> for map of specific states.			

#### Preplant Incorporated (Fall)<sup>1</sup>

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	2.5	2.5
Medium	3.0	3.5
Fine	3.5	3.5
<sup>1</sup> For use in Minnesota, North Dakota, and South Dakota only.		

# **Crop-specific Restrictions (All Tillage Types)**

- DO NOT apply Prowl H2O postemergence.
- **DO NOT** feed forage or graze livestock in treated sunflower or other Group 20B oilseeds fields.

### **Tobacco**

Prowl H2O may be applied by ground only.

**Use Method, Rate, and Timing Preplant Incorporated.** Apply and incorporate within 60 days of transplanting tobacco.

Applied according to directions and under normal growing conditions, **Prowl H2O** will not harm transplanted tobacco. Under stress conditions for plant growth, including cold/wet or hot/dry weather, **Prowl H2O** can produce a temporary retardation of tobacco development.

**Layby. Prowl H2O** may be applied as a directed spray after the last normal cultivation (layby), usually 4 to 6 weeks after transplanting tobacco. Apply **Prowl H2O** in a 16-inch to 24-inch band between the crop rows. **DO NOT** contact tobacco plants with spray.

#### **Use Rate**

### **Preplant Incorporated**

Use Area	Soil Texture	Rate (pts/A)	
Florida	Coarse	2.0	
Georgia	Medium		
Maryland North Carolina	sandy clay loams, loams	2.0	
South Carolina Virginia	silt loams, silts	2.5	
	Fine	2.5	
	Coarse	2.0	
Other states	Medium	3.0	
	Fine	3.0	

### Layby

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.5
Medium	2.0
Fine	2.0

#### **Crop-specific Restrictions**

 DO NOT apply as a broadcast spray or contact may cause malformed tobacco leaves.

# Vegetable Soybean (Edamame)

Prowl® H2O herbicide may only be applied by ground.

# Use Method, Rate, and Timing

**Prowl H20** may be applied to edamame grown under conventional-tillage, minimum-tillage, or no-till systems.

**Preplant Surface.** Apply **Prowl H2O** within 15 days of planting. **Prowl H2O** may be applied within 45 days of planting when used in tank mix or applied sequentially with postemergence-applied herbicides registered for use in edamame.

**Preplant Incorporated.** Apply **Prowl H2O** within 60 days of planting and incorporate.

**Preemergence.** Apply **Prowl H2O** at planting or up to 2 days after planting. Apply to a firm seedbed, free of clods. **DO NOT** apply **Prowl H2O** preemergence north of Interstate 80, except in the states of Indiana, Michigan, and Ohio.

#### **Use Rate**

#### **Preplant Surface, Preplant Incorporated**

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	1.5	2.0
Medium	2.5*	3.0
Fine**	3.0	3.0

<sup>\*</sup> **DO NOT** apply more than 2.1 pts for Southern states; see **Use Precautions** for map of specific states.

#### **Preemergence**

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	1.5	1.5
Medium	2.0	2.0
Fine	2.0	2.5

#### **Crop-specific Restrictions**

- Livestock can graze or be fed forage from treated vegetable soybean (edamame) fields.
- Preharvest Interval (PHI) 85 days
- DO NOT apply more than one application per crop season at the highest rate per acre for any given soil type and application method.
- DO NOT use in California.

### **Wheat and Triticale**

**Prowl H20** may be applied by ground, air, chemigation, or on dry bulk fertilizer (only delayed preemergence and postemergence applications).

**Prowl H20** may be applied preemergence, delayed preemergence, or postemergence for weed control in fall-seeded, winter-seeded, or spring-seeded wheat or triticale.

### Use Method, Rate, and Timing

Apply to a seedbed which is firm and free of clods and trash. The seedbed **MUST** be prepared to ensure thorough seed coverage by the soil and seed-to-soil contact. Use high quality seed. When application of **Prowl H2O** is intended to be made preemergence or delayed preemergence, plant seed at least 1-inch deep to avoid possible crop injury, but not too deep for proper germination. When application of **Prowl H2O** is intended to be made postemergence, plant seed at least 1/2-inch to 1-inch deep to avoid crop injury.

Uniformly apply **Prowl H2O** preemergence, delayed preemergence (after wheat or triticale seed has germinated), or postemergence from the 1st-leaf stage of wheat or triticale until before the flag leaf is visible/emerged for weed control. Apply **Prowl H2O** before weed germination. Emerged weeds will not be controlled by this treatment.

<sup>\*\*</sup>For heavy clay soils, apply **Prowl H2O** at the broadcast rate of 3.2 pints per acre.

For control of established weeds, **Prowl® H2O herbicide** may be tank mixed with any postemergence herbicide registered for use in wheat or triticale. **Prowl H2O** provides residual control of weeds listed in this label. Always perform a mixing test to check the compatibility of **Prowl H2O** with all potential tank mix partners.

#### **Use Rate**

Soil Texture	Southern States <sup>1</sup> (pts/A)	Northern States <sup>1</sup> (pts/A)
Coarse	1.5 to 2.0	1.5
Medium	1.5 to 3.0	1.5 to 2.5
Fine	2.0 to 3.0	2.0 to 3.0
<sup>1</sup> See <b>Use Area</b> map in <b>Use Precautions</b> .		

In wheat stubble, **Prowl H2O** may be applied in the fall, spring, or early summer during the fallow period after wheat harvest as a planned residual treatment to control labeled broadleaf and grass weeds. **Prowl H2O** must be applied with a tank mix partner (i.e. glyphosate) for control of emerged weeds. There must be at least a 4-month interval between a **Prowl H2O** fallow application and the rotational planting of any fall-seeded cereal crop. Apply up to, but **DO NOT** apply more than, 3 pints/A of **Prowl H2O** in any fallow application. **DO NOT** make more than one application of **Prowl H2O** during a single fallow period before rotational planting of any fall-seeded cereal crops. Follow rotational crop restrictions when planting a rotational crop after a fallow application of **Prowl H2O**.

#### **Crop-specific Restrictions**

- DO NOT apply more than 3.0 pints/A of Prowl H2O per season.
- Preharvest Interval (PHI) for grain and straw 60 days
- Preharvest Interval (PHI) for hav 28 days
- Preharvest Interval (PHI) for forage 11 days

# **Crop-specific Precautions**

**NOTE:** If loss of grain crop occurs, any crop registered for **Prowl H2O** preplant incorporated use may be replanted the same year without adverse effects. **DO NOT** replant wheat or triticale.

# **Conditions of Sale and Warranty**

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

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